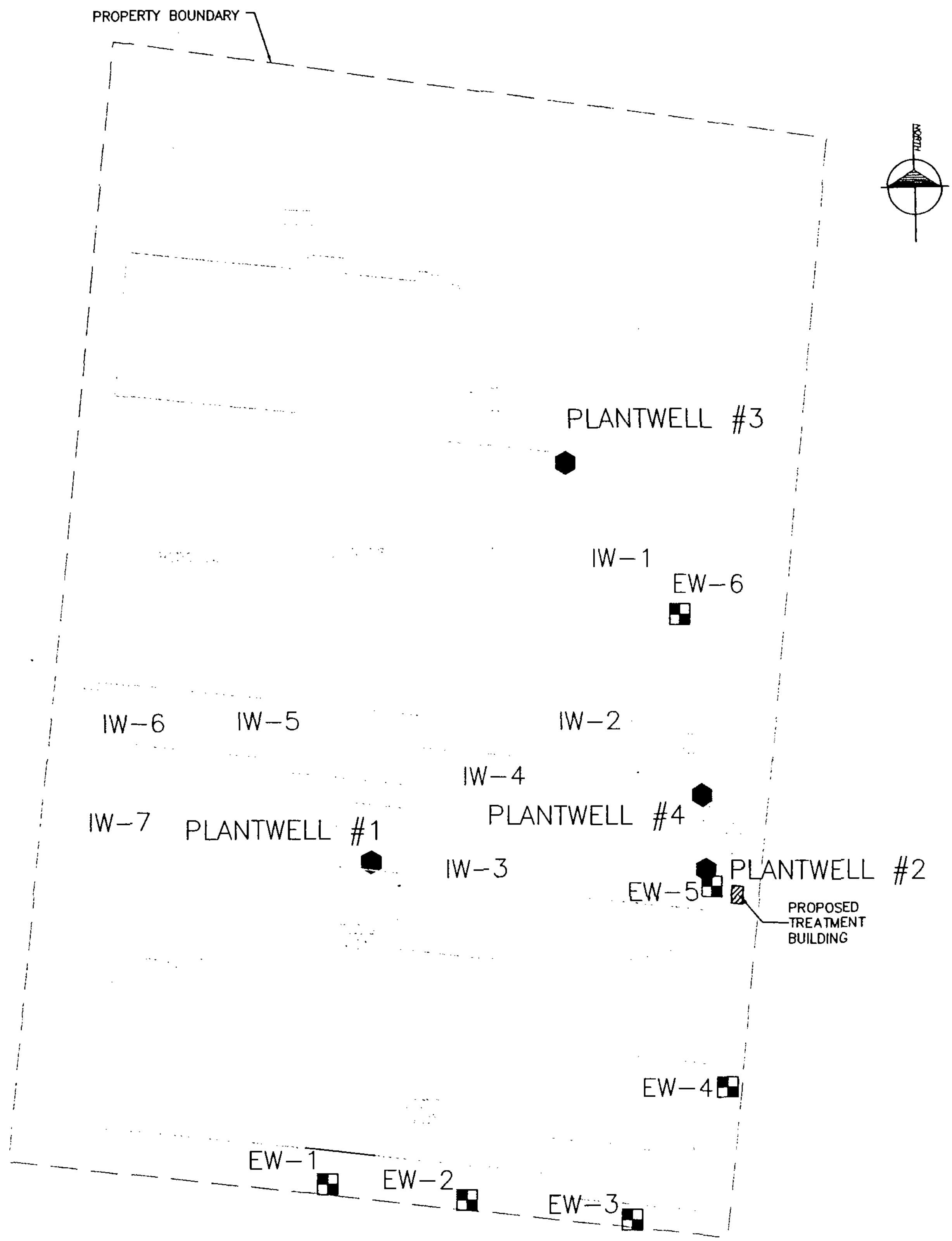
TABLE H
COMBINATIONS OF EXTRACTION WELLS AT 100 GPM EACH

EW-1,2,3,4 Overall Average	Sampling Event August-01 UG/L	October-01 UG/L	December-01 UG/L	March-02 UG/L	Maximum Value UG/L
1,1,1-Trichloroethane	**151.3**	91.1	86.6	73.6	151.3
1,1-Dichloroethene	**99.3**	22.3	21.1	23.4	99.3
1,2-Dichloroethane	**94.3**	5.9	4.9	8.5	94.3
Carbon tetrachloride	**94.3**	1.9	2.0	2.2	94.3
cis-1,2-Dichloroethene	792.5	817.6	706.0	**875.3**	875.3
Tetrachloroethene	1004.2	1103.3	1173.0	**1593.5**	1593.5
Trichloroethene	4440.2	**4484.0**	3916.2	4400.2	4484.0
Vinyl chloride	**94.3**	70.9	70.4	33.0	94.3

EW-3,4,5,6 Overall Average	Sampling Event August-01 UG/L	October-01 UG/L	December-01 UG/L	March-02 UG/L	Maximum Value UG/L
1,1,1-Trichloroethane	**590.7**	469.7	427.4	444.7	590.7
1,1-Dichloroethene	**78.8**	65.0	67.1	69.4	78.8
1,2-Dichloroethane	**28.5**	5.4	4.2	7.3	28.5
Carbon tetrachloride	**28.5**	16.9	0.8	0.5	28.5
cis-1,2-Dichloroethene	477.7	432.0	382.6	**574.3**	574.3
Tetrachloroethene	219.9	213.4	210.3	**310.3**	310.3
Trichloroethene	**1452.6**	1262.3	1236.8	1020.6	1452.6
Vinyl chloride	**29.3**	5.7	5.4	5.4	29.3

EW-1,2,3,4,5,6 Overall Average	Sampling Event August-01 UG/L	October-01 UG/L	December-01 UG/L	March-02 UG/L	Maximum Value UG/L
1,1,1-Trichloroethane	**446.0**	321.8	293.8	303.1	446.0
1,1-Dichloroethene	**104.6**	46.6	46.7	48.8	104.6
1,2-Dichloroethane	**71.1**	4.6	3.8	6.1	71.1
Carbon tetrachloride	**71.1**	12.3	1.5	1.7	71.1
cis-1,2-Dichloroethene	655.2	635.8	570.7	**727.4**	727.4
Tetrachloroethene	805.3	872.7	921.7	**1269.0**	1269.0
Trichloroethene	**3216.0**	3197.8	2801.3	3118.8	3216.0
Vinyl chloride	**71.6**	48.7	48.3	23.2	71.6

Maximum Value per Compound from Above Combinations	UG/L
1,1,1-Trichloroethane	590.7
1,1-Dichloroethene	104.6
1,2-Dichloroethane	94.3
Carbon tetrachloride	94.3
cis-1,2-Dichloroethene	875.3
Tetrachloroethene	1593.5
Trichloroethene	4484.0
Vinyl chloride	94.3



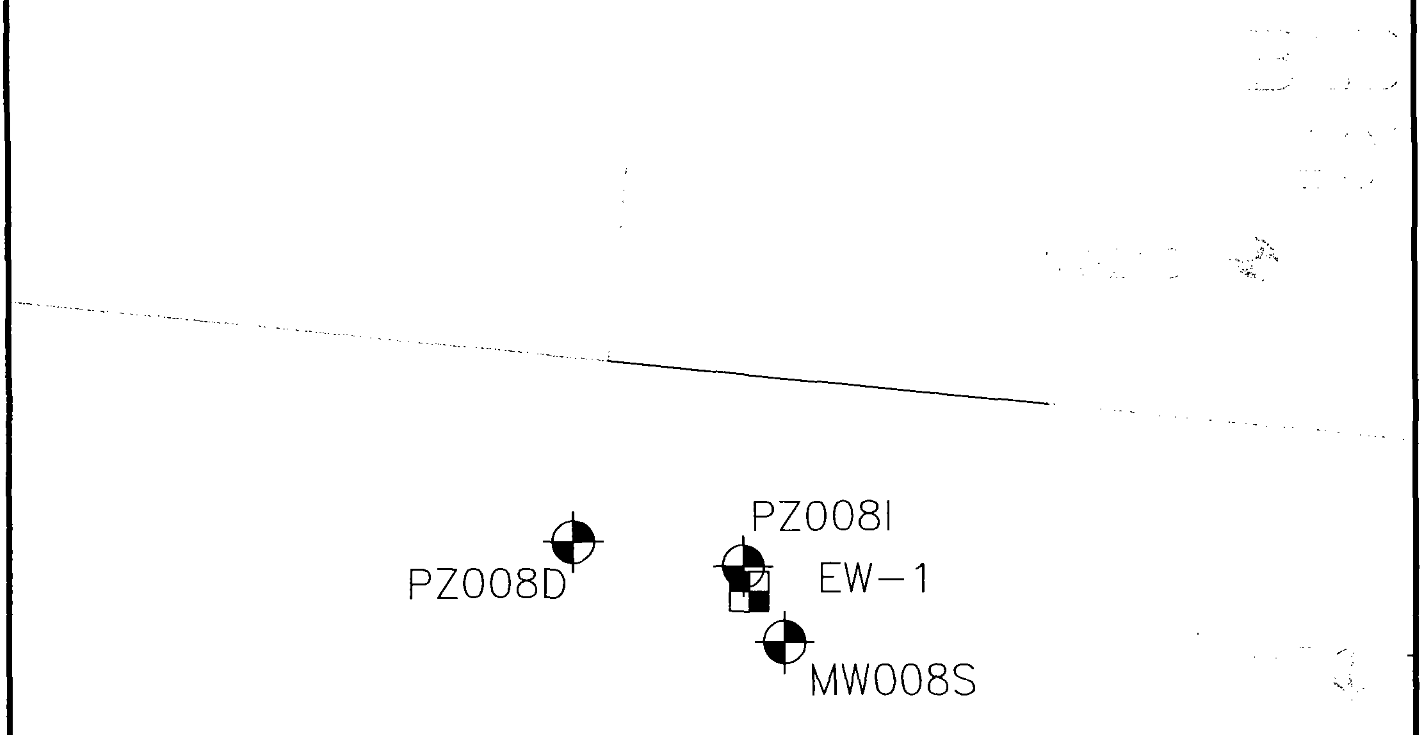
LEGEND

- PROPOSED INJECTION WELLS
- PROPOSED EXTRACTION WELLS
- EXISTING PLANT PROCESS WELLS

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

FIGURE 1
WELL LOCATIONS
DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: JE	DATE: FEB. 18, 2003	SCALE: 1:250	WELLS.DWG



LEGEND

- EXTRACTION WELL

- MONITORING WELL USED IN CALCULATION

- MONITORING WELL NOT USED

NORTH

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

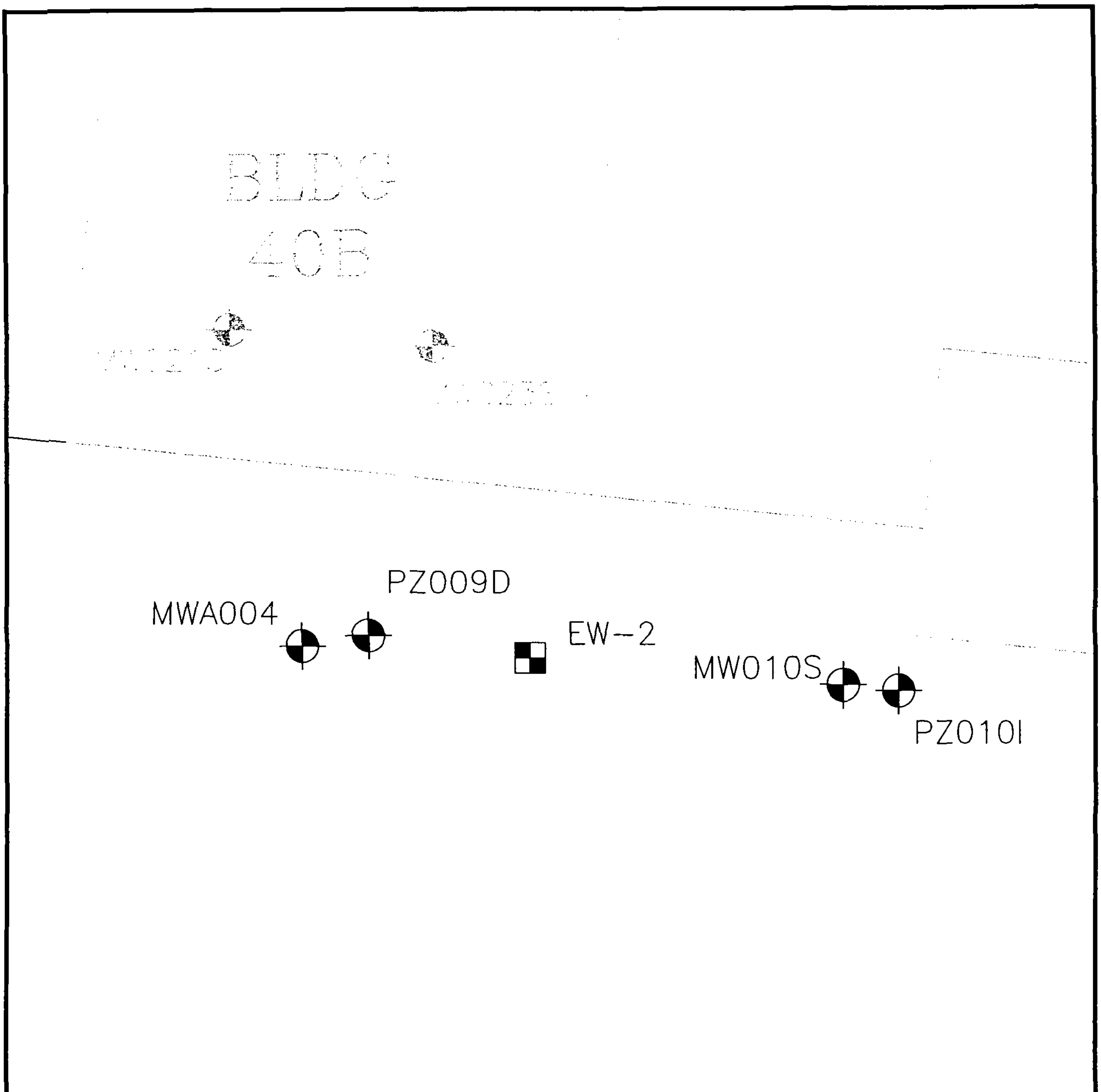
4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: FEB. 18, 2003
CHECKED BY: RS	EDITED BY: JRD
FILE NAME: EXTRACTION WELL DATA	

FIGURE 2
EXTRACTION WELL 1

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

PROJECT NUMBER 55465



LEGEND

- EXTRACTION WELL

- MONITORING WELL USED IN CALCULATION

- MONITORING WELL NOT USED

NORTH

E A R T H T E C H

A tyco INTERNATIONAL LTD. COMPANY

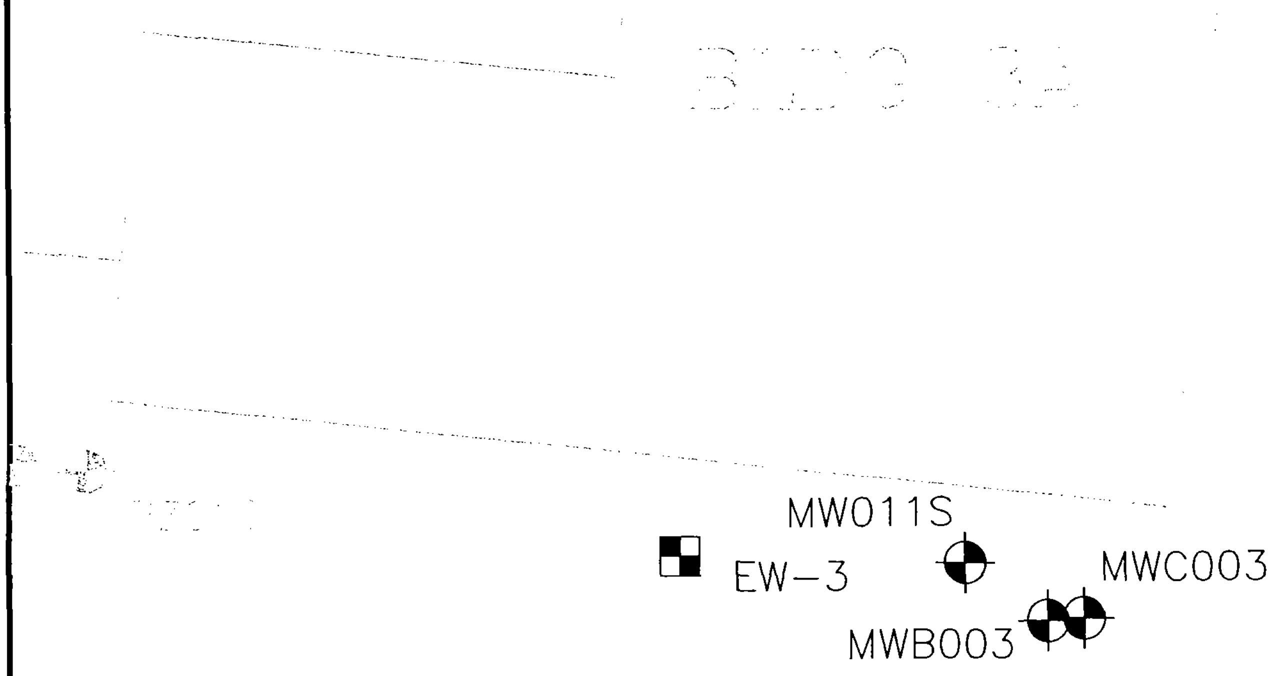
4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: FEB. 18, 2003
CHECKED BY: RS	EDITED BY: JRD
FILE NAME: EXTRACTION WELL DATA	

FIGURE 3
EXTRACTION WELL 2

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

PROJECT NUMBER 55465



LEGEND

- EXTRACTION WELL

- MONITORING WELL USED IN CALCULATION

- MONITORING WELL NOT USED

NORTH

E A R T H T E C H

A tyco INTERNATIONAL LTD. COMPANY

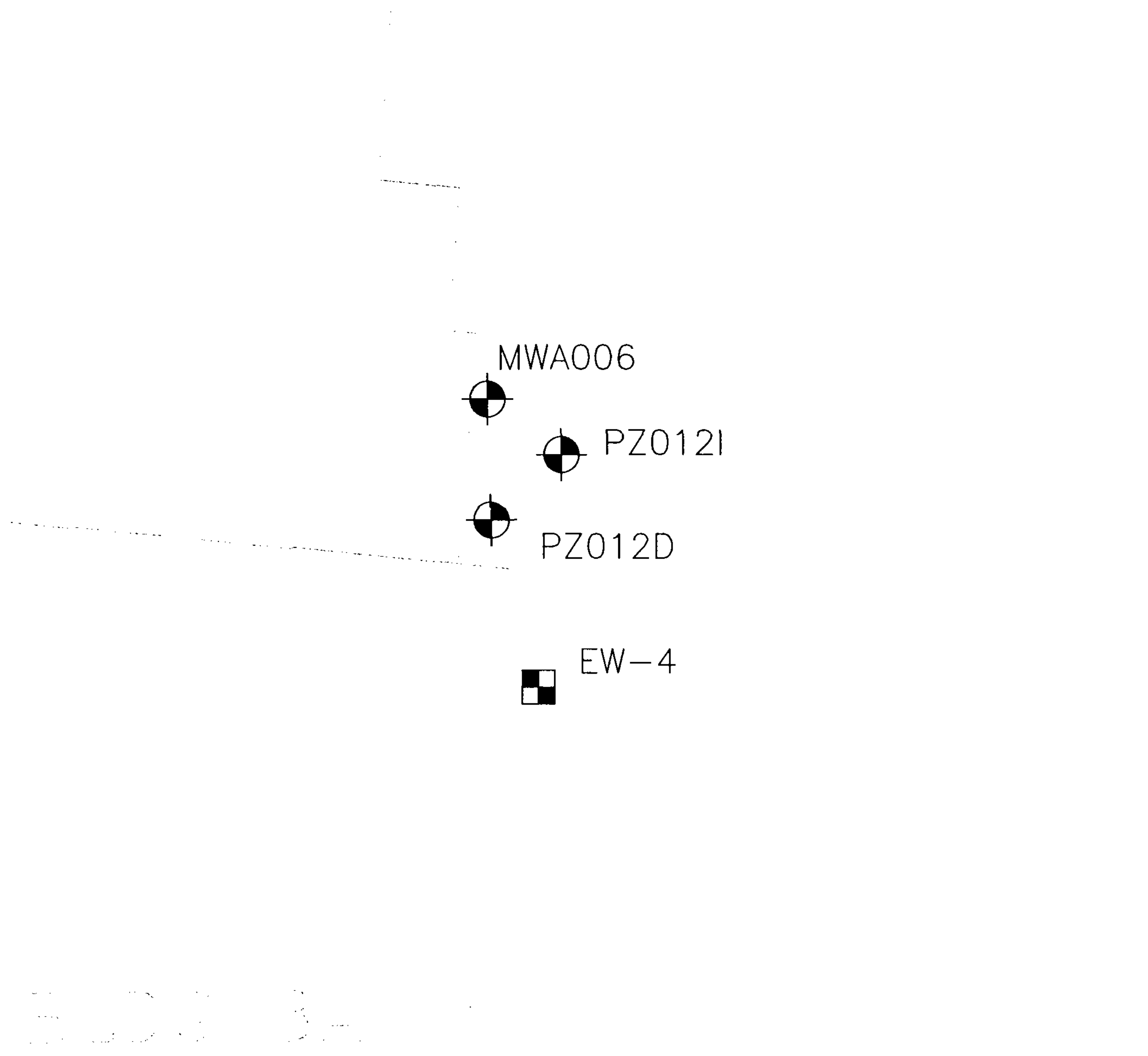
4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: FEB. 18, 2003
CHECKED BY: RS	EDITED BY: JRD
FILE NAME: EXTRACTION WELL DATA	

FIGURE 4
EXTRACTION WELL 3

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

PROJECT NUMBER 55465



LEGEND

- EXTRACTION WELL

- MONITORING WELL USED IN CALCULATION

- MONITORING WELL NOT USED

NORTH

E A R T H T E C H

A **tyco** *INTERNATIONAL LTD. COMPANY*

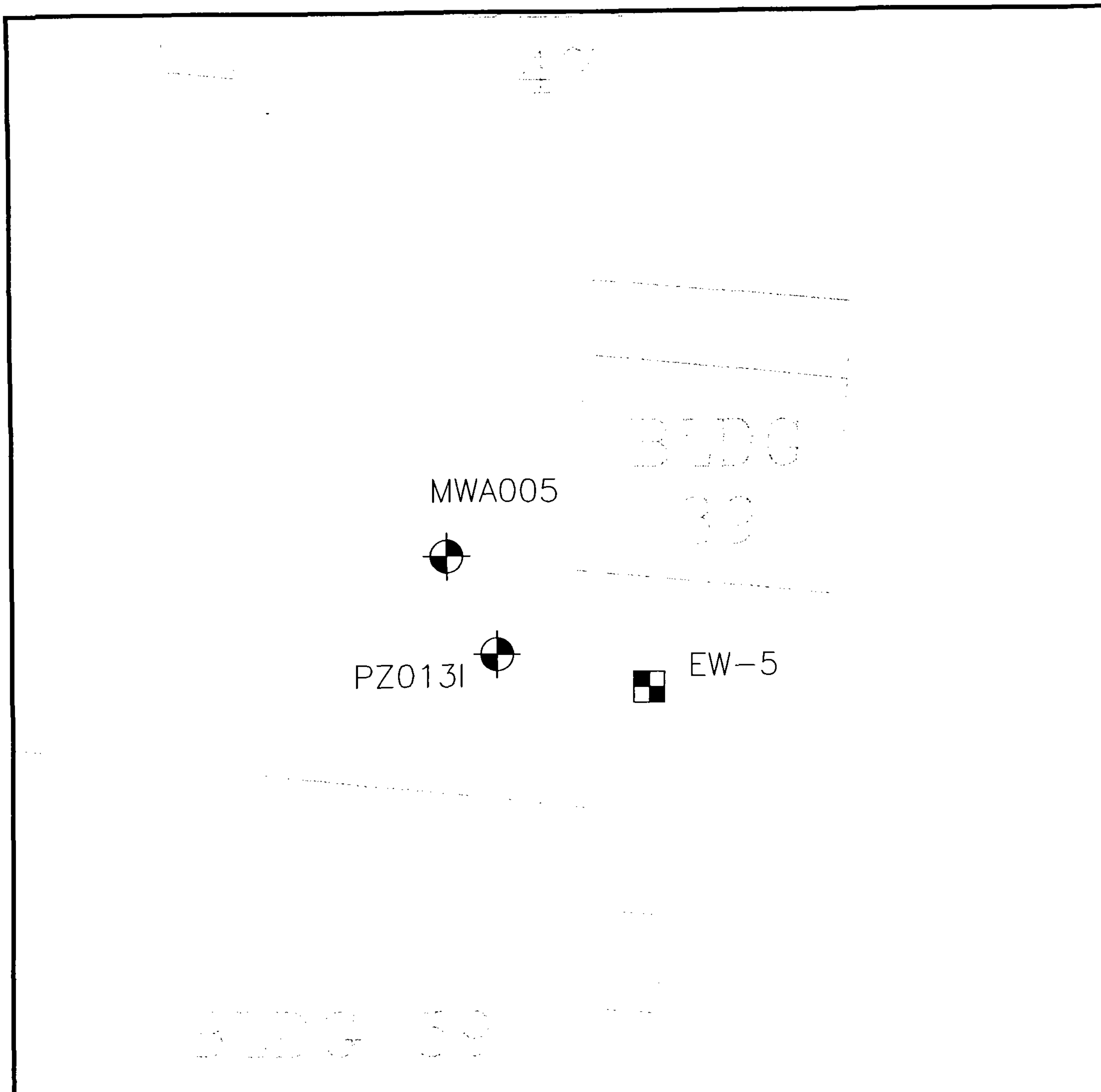
4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: FEB. 18, 2003
CHECKED BY: RS	EDITED BY: JRD
FILE NAME: EXTRACTION WELL DATA	

FIGURE 5
EXTRACTION WELL 4

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

PROJECT NUMBER 55465

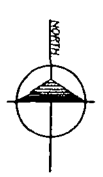


LEGEND

- EXTRACTION WELL

- MONITORING WELL USED IN CALCULATION

- MONITORING WELL NOT USED



E A R T H T E C H

A tyco INTERNATIONAL LTD. COMPANY

4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

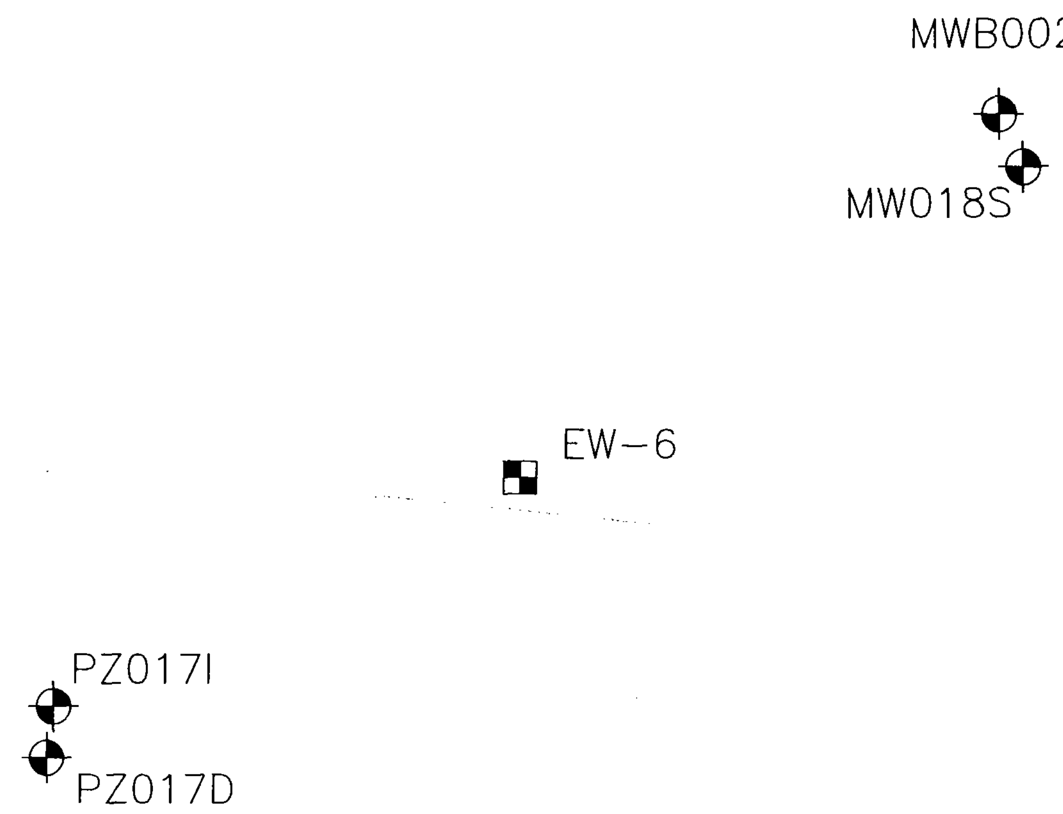
DRAWN BY: JRD	DATE: FEB. 18, 2003
CHECKED BY: RS	EDITED BY: JRD
FILE NAME: EXTRACTION WELL DATA	

FIGURE 6

EXTRACTION WELL 5

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

PROJECT NUMBER 55465

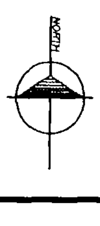


LEGEND

- EXTRACTION WELL

- MONITORING WELL USED IN CALCULATION

- MONITORING WELL NOT USED



E A R T H T E C H

A tyco INTERNATIONAL LTD. COMPANY

4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: FEB. 18, 2003
CHECKED BY: RS	EDITED BY: JRD
FILE NAME: EXTRACTION WELL DATA	

FIGURE 7

EXTRACTION WELL 6

DAYTON THERMAL PRODUCTS SITE

DAYTON, OHIO

PROJECT NUMBER 55465

Material Safety Data Sheet

Sodium Lactate, 60% **24 Hour Emergency Phone: CHEMTREC 1-800-424-9300**

Date of Preparation: 9/17/02 Revision: 9/17/02

Section 1 - Chemical Product and Company Identification

Synonyms: Lacolin; Lactic Acid, monosodium Salt; Propanioc acid, 2-hydroxy-, monosodium salt
CAS No: 72-17-3
Molecular Weight: 112.07
Chemical Formula: $C_3H_5O_3Na$
Distributed by:
Hawkins, Inc. 3100 E. Hennepin Avenue Minneapolis, MN 55413 (612-331-6910)

Section 2 - Composition / Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Lactate	72-17-3	60%	Yes

Section 3 - Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE EYE IRRITATION.

Potential Health Effects

To the best of our knowledge, the toxicological properties of this material have not been thoroughly investigated.

Inhalation: No adverse health effects expected from inhalation.

Ingestion: Not expected to be a health hazard via ingestion.

Skin Contact: Not expected to be a health hazard from skin exposure.

Eye Contact: May cause mild irritation, possible reddening.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

Section 4 - First Aid Measures

Inhalation:
Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:
Not expected to require first aid measures. If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact:
Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Section 5 - Fire-Fighting Measures

NFPA Ratings:
Health: 1 Flammability: 0 Reactivity: 0

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6 - Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

Section 7 - Handling and Storage

Keep in a tightly closed container, stored in a cool (> 65°F), dry, ventilated area. Protect against physical damage. Avoid long storage times. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Section 8 - Exposure Controls / Personal Protection

Airborne Exposure Limits: None established.

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved):
For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9 - Physical and Chemical Properties

Appearance:
Colorless to yellow liquid.

Odor:
Odorless.

Solubility:
Complete (100%)

Specific Gravity:
1.31

pH:
6.5 - 8.5

% Volatiles by volume @ 21C (70F):
No information found.

Boiling Point:
110C (230F)

Melting Point:
17C (63F)

Vapor Density (Air=1):
0.7

Vapor Pressure (mm Hg):
14 @ 20C (68F)

Evaporation Rate (BuAc=1):
No information found.

Section 10 - Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities: No information found.

Conditions to Avoid: None.

Section 11- Toxicological Information

Oral rat LD50: 2000 mg/Kg. Irritation Data for Sodium Lactate: (Std Draize, rabbit, eye): 100 mg - mild.

--------\Cancer Lists\--

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Sodium Lactate (72-17-3)	No	No	None

Section 12 - Ecological Information

Environmental Fate:
Mobility: Completely soluble.
Persistence / degradability: Product is a salt of lactic acid, which is readily biodegradable.
Bioaccumulation: Unlikely.
Ecotoxicity: Ecological injuries are not known or expected under normal use; (No effect on Daphnia @ 10g/L).

Environmental Toxicity: No information found.

Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14 - Transport Information

Not regulated.

Section 15 - Regulatory Information

--------\Chemical Inventory Status - Part 1\--------

Ingredient	TSCA	EC	Japan	Australia
Sodium Lactate (72-17-3)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\--------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Sodium Lactate (72-17-3)	Yes	Yes	No	Yes

-------\Federal, State & International Regulations - Part 1\--------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Sodium Lactate (72-17-3)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\--------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Sodium Lactate (72-17-3)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Mixture / Liquid)

Section 16 - Other Information

Prepared By: Chris W. Gibson
Revision Notes: New Product
Disclaimer:
Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information.

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, express or implied, is made regarding performance, stability, or otherwise. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, and storage. Other factors may require additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, the handling and use remains the responsibility of the customer. No suggestions are intended as, and should not be construed as, a recommendation to infringe on any existing patents or to violate any Federal, State, or local laws.

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Justin Kelly
EARTH TECH
35133 Schoolcraft Road
Livonia, MI 48150

03/13/2003

Job No.: 03.04851
Sample No.: 828154

Dayton Thermal 63393
Dayton Thermal 63393

Sample Description: S.New Shallow

Date Taken: 03/10/2003 Time Taken: 19:00 Date Received: 03/11/2003

Parameter	Result	Unit	Date Prepared	Date Analyzed	Lab Tech.	Methodology	Note
Alkalinity, Bicarb. (CaCO3)	454	mg/L		03/12/2003	dgr	SM 2320B	
Alkalinity, Carb. (CaCO3)	<10	mg/L		03/12/2003	dgr	SM 2320B	
Chloride	252	mg/L		03/11/2003	dgr	EPA 325.3	
Fluoride	0.17	mg/L		03/12/2003	gcw	SM 4500-F C.	
Nitrogen, Nitrate+Nitrite	2.54	mg/L		03/11/2003	gcw	SM 4500-NO3 F.	
Solids, Suspended	7,640	mg/L		03/12/2003	mss	EPA 160.2	
Sulfate	88	mg/L		03/12/2003	jmg	EPA 375.4	
Barium, ICP	1.08	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Boron, ICP	0.919	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Cadmium, ICP	<0.030	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Calcium, ICP	1,290	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Iron, ICP	172	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Magnesium, ICP	448	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Manganese, ICP	6.17	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Potassium, ICP	*	mg/L	03/12/2003			EPA 200.7	
Sodium, ICP	133	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Strontium, ICP	1.45	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	

K data available 3/14 AM

PRELIMINARY REPORT

LEGEND

— - PROPERTY LINE

— - $\frac{1}{4}$ MILE OFFSET FROM PROPERTY LINE

▽ - PROPOSED INJECTION WELL

◪ - PROPOSED EXTRACTION WELLS

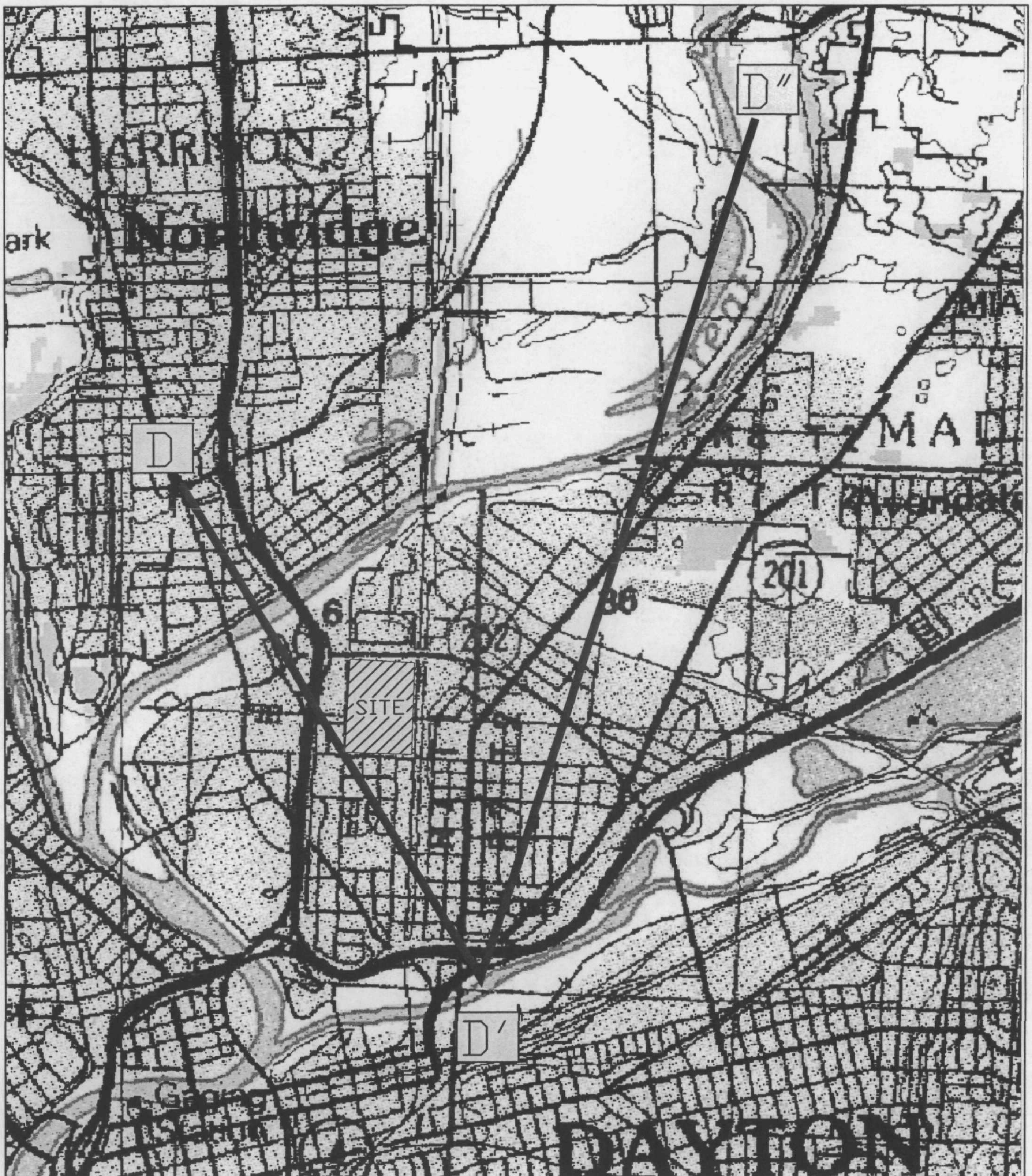
● - EXISTING EXTRACTION WELLS

0' 400'

SCALE

SOURCE: LBG DRAWING 3CHDA14I, 3CHDA14K AND STANELY & 75

EARTH TECH A tyco INTERNATIONAL LTD. COMPANY 4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083		QUARTER MILE LOCATOR MAP DAYTON THERMAL PRODUCTS SITE DAYTON, OHIO	
DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS SECTION LOCATOR



NORTH

0' 1/2 MILE

SCALE

SOURCE: USGS DAYTON, OHIO, UNITED STATES 01 JULY 1984

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

USGS

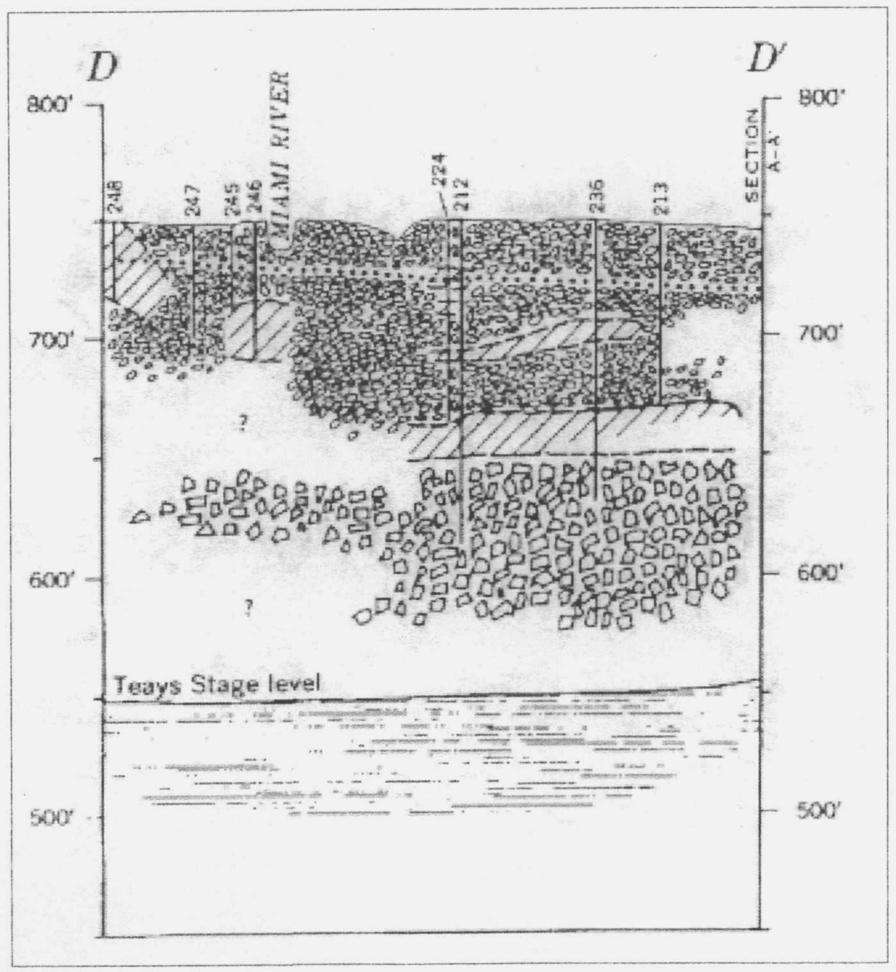
GEOLOGICAL CROSS-SECTION

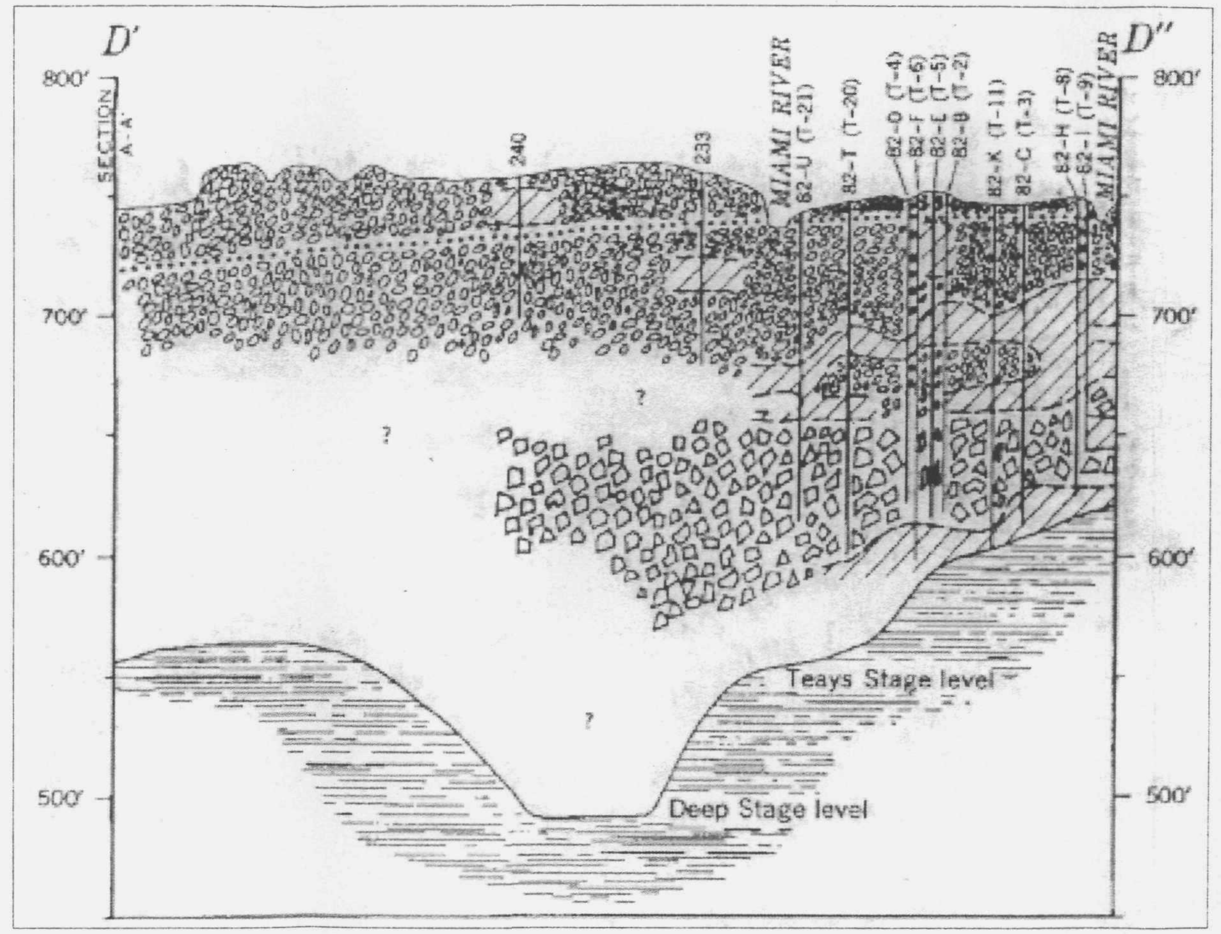
LOCATOR MAP

DAYTON THERMAL PRODUCTS SITE

DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: JK	DATE: MARCH 12, 2003	SCALE: 2" = 1 MILE	USGS X-LOCATOR





EXPLANATION

Upper aquifer
Sand and gravel deposits occurring at or near the surface; generally overlies the till-rich zone

Till-rich zone
Fairly widespread sheets, lenses, and masses of till; contains pockets and lenses of sand and gravel; occurs as a layer of low permeability and generally separates the sand and gravel deposits into an upper and a lower aquifer

Lower aquifer
Sand and gravel deposits generally occurring between the till-rich zone and bedrock; contains interbedded lenses and masses of till and clay, especially near the bedrock surface

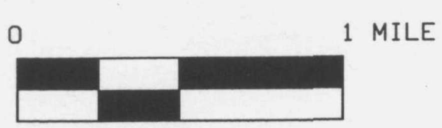
Shale of Ordovician age with thin interbedded limestone layers

Geologic contact
Dashed where approximate

Piezometric surface in lower aquifer
Based on water-level measurements made in October 1959; represents the water table where the till-rich zone is absent. Datum is mean sea level

250

Well
Number refers to well listed in the section "Records of Wells in the Dayton Area"



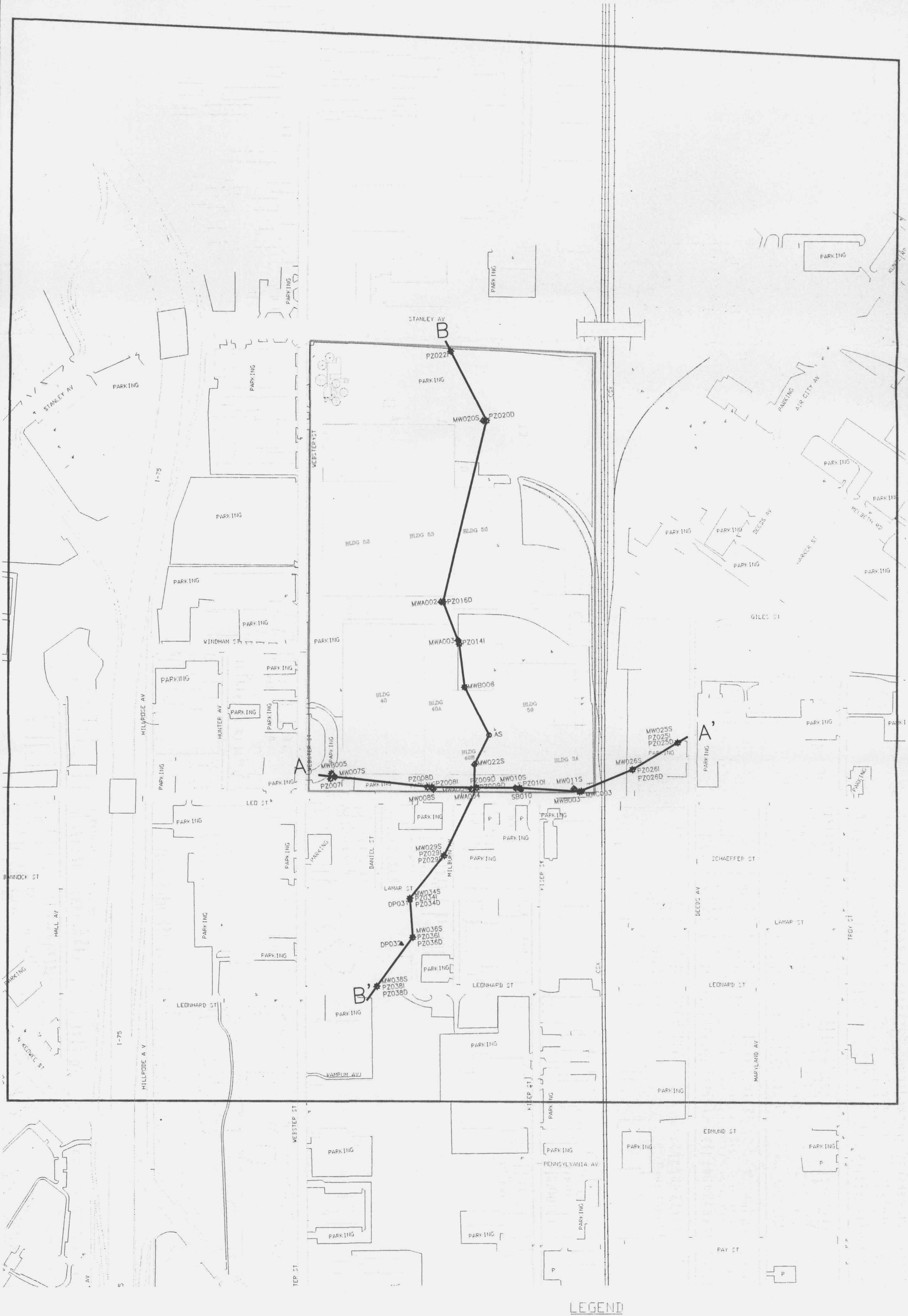
SCALE

SOURCE: GROUND-WATER RESOURCES OF THE DAYTON AREA, OHIO (USGS DOCUMENT)

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

USGS GEOLOGICAL CROSS-SECTIONS
DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: RS	DATE: March 11, 2003	SCALE: -----	USGS Cross Sections



LEGEND

- PROPERTY LINE

- $\frac{1}{4}$ MILE OFFSET FROM PROPERTY LINE

0' 400'

SCALE

NORTH

SOURCE: LBG DRAWING 3CHDA14I, 3CHDA14K AND STANELY & 75

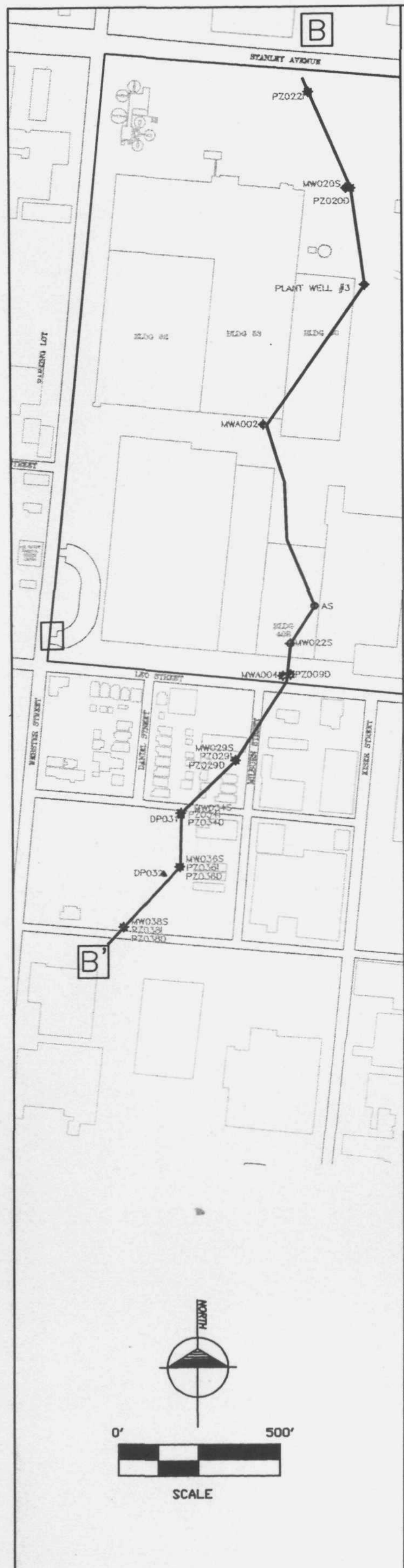
EARTH TECH

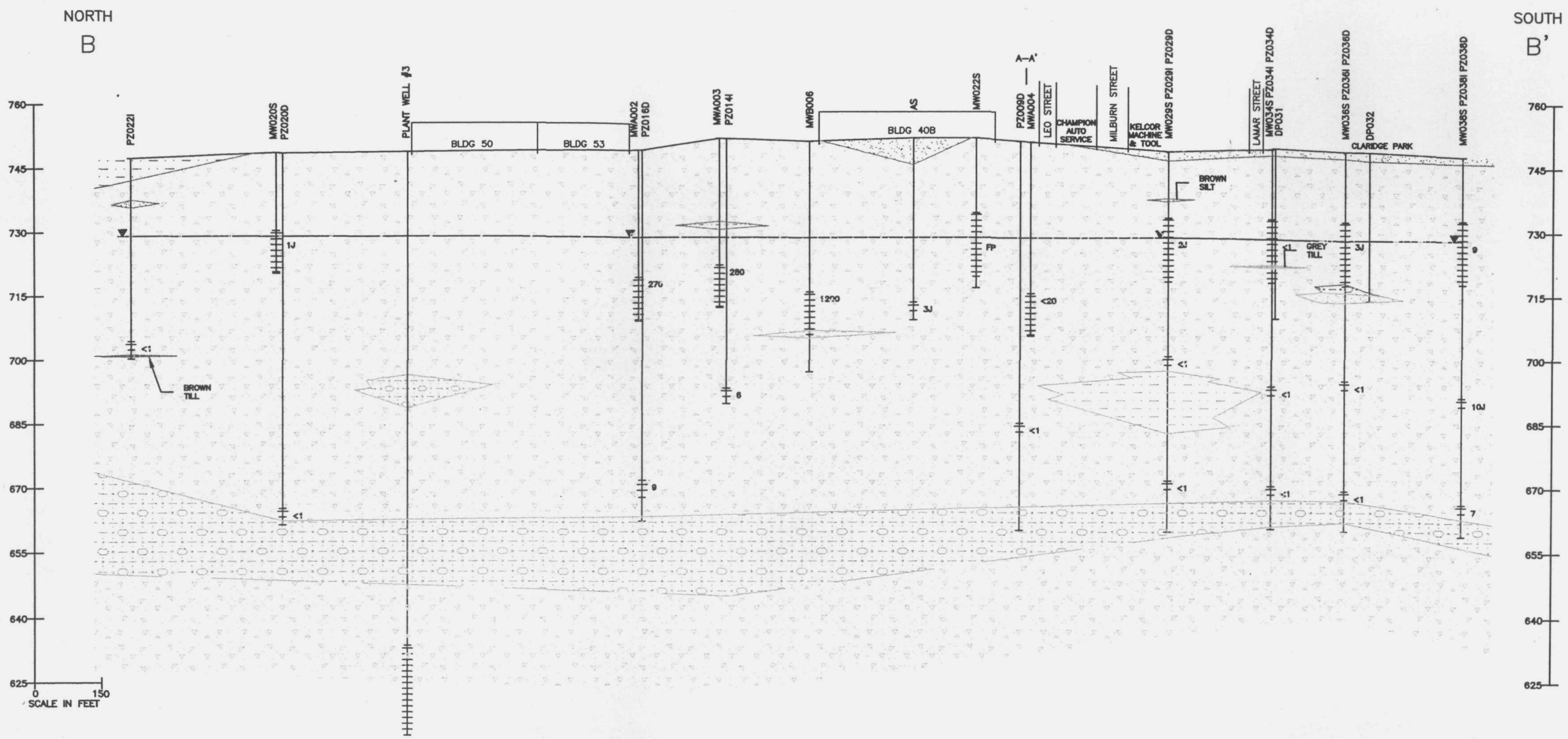
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

SITE SPECIFIC GEOLOGICAL CROSS-SECTION LOCATOR MAP

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME: CROSS SECTION LOCATOR
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: -----	





LEGEND

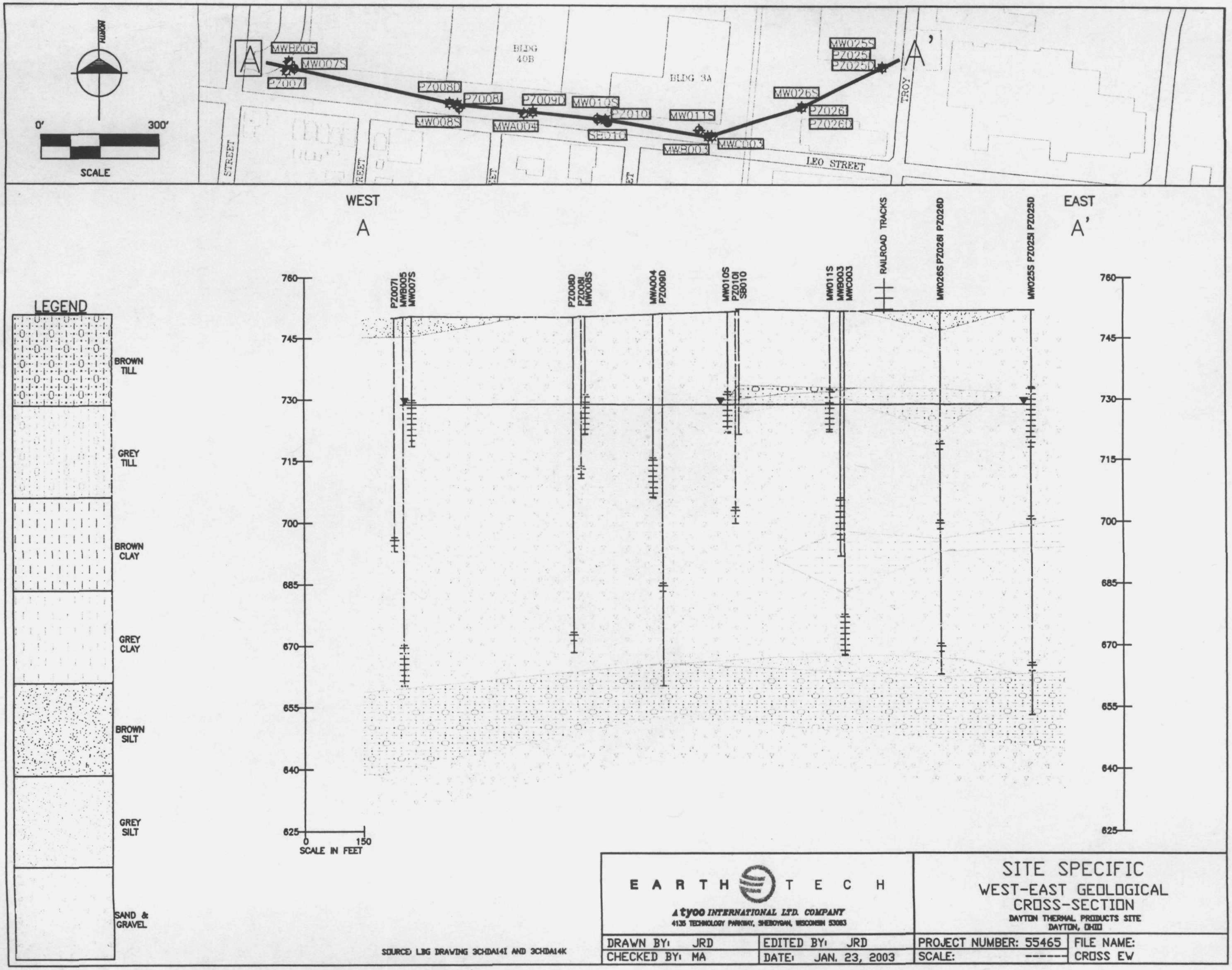
BROWN TILL	GREY TILL	BROWN CLAY	GREY CLAY	BROWN SILT	GREY SILT	SAND & GRAVEL

SOURCE: LBG DRAWING 3CHDA14I AND 3CHDA14K

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

SITE SPECIFIC
NORTH-SOUTH GEOLOGICAL CROSS-SECTION
DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS NS



EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

SITE SPECIFIC
WEST-EAST GEOLOGICAL CROSS-SECTION

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS EW

SDMS US EPA Region V

Imagery Insert Form

Some images in this document may be illegible or unavailable in SDMS.
Please see reason(s) indicated below:

☐ Illegible due to bad source documents. Image(s) in SDMS is equivalent to hard copy.

Specify Type of Document(s) / Comments:

☐ Includes ___ COLOR or RESOLUTION variations.
Unless otherwise noted, these pages are available in monochrome. The source document page(s) is more legible than the images. The original document is available for viewing at the Superfund Records Center.

Specify Type of Document(s) / Comments:

☐ Confidential Business Information (CBI).
This document contains highly sensitive information. Due to confidentiality, materials with such information are not available in SDMS. You may contact the EPA Superfund Records Manager if you wish to view this document.

Specify Type of Document(s) / Comments:

X Unscannable Material:
Oversized ____ or ____ Format.
Due to certain scanning equipment capability limitations, the document page(s) is not available in SDMS. .

Specify Type of Document(s) / Comments:

OVERSIZED MAP: USGS TOPOGRAPHIC MAPS OF GRANITE CITY, MONKS MOUND, CAHOKIA & FRENCH VILLAGE

☐ Document is available at the EPA Region 5 Records Center.

Specify Type of Document(s) / Comments:

SITE INVESTIGATION REPORT
CHRYSLER CORPORATION
DAYTON THERMAL PRODUCTS PLANT
1600 WEBSTER STREET
DAYTON, OHIO 45404

Volume I of III

Report Text

Prepared For

Chrysler Corporation
800 Chrysler Drive
CIMS 482-00-51
Auburn Hills, Michigan 48326-2757

Prepared By

Clean Tech
2700 Capitol Trail
Newark, DE 19711
(302) 999-0924

September, 1995

Clean Tech, Inc
Environmental Consultants

2700 Capitol Trail
Newark, DE 19711
302•999•0924
FAX 302•999•0925

CLEAN TECH

September 14, 1995

Mr. Curtis Chapman
Chrysler Corporation
800 Chrysler Drive
CIMS 482-00-51
Auburn Hills, MI 48326-2757

**RE: Finalized Site Investigation Report
Chrysler Corporation Dayton Thermal Products Plant
Dayton, Ohio**

Dear Mr. Chapman:

Enclosed please find the three volume finalized document Site Investigation, Chrysler Corporation Dayton Thermal Products Plant, Dayton Ohio. This submittal includes your review comments and requested report revisions. Comments received from Mr. Doug Orf are incorporated in this final submittal. This document has been forwarded to Mr. Orf per your request.

If you have any questions, please contact Clean Tech at (302) 999-0924.

Sincerely,

Steven W. Newsom, P.G.
Principal Geologist
CLEAN TECH

Sincerely,

Deborah A. Buniski, P.E.
President
CLEAN TECH

e:\usr-data\chrysler\corres.\sub995cc.doc

Clean Tech, Inc
Environmental Consultants

2700 Capitol Trail
Newark, DE 19711
302•999•0924
FAX: 302•999•0925

CLEAN TECH

September 14, 1995

Mr. Douglas J. Orf
Chrysler Corporation
Dayton Thermal Products Plant
1600 Webster Street
Dayton, Ohio 45404

RE: Finalized Site Investigation Report
Chrysler Corporation Dayton Thermal Products Plant
Dayton, Ohio

Dear Mr. Orf:

Enclosed please find the three volume finalized document Site Investigation, Chrysler Corporation Dayton Thermal Products Plant, Dayton Ohio. This submittal includes comments and requested report revisions as received from you and Mr. Curtis Chapman. This document has been forwarded to Mr. Chapman.

If you have any questions, please contact Clean Tech at (302) 999-0924.

Sincerely,

Steven W. Newsom, P.G.
Principal Geologist
CLEAN TECH

Sincerely,

Deborah A. Buniski, P.E.
President
CLEAN TECH

e:\usr-data\chrysler\corres.\sub995do.doc

Volume I of III
Report Text
Table of Contents

Volume I of III Continued
Report Text
Table of Contents

Section **Page**

Executive Summary

Clean Tech completed this site investigation at Chrysler Corporation's Dayton Thermal Products Plant located at 1600 Webster Street in Dayton, Ohio. The objectives were:

- Characterize the type and extent of contaminants in the unsaturated zone (above the water table) and saturated soil zones;
- Characterize the extent of dissolved phase contaminants in the groundwater;
- Assess the source of contaminants;
- Evaluate the potential for migration of contaminants off site;
- Obtain site data useful for evaluating remediation technologies;
- Evaluate potential for contamination due to dense non-aqueous phase liquids (DNAPL).

A review of existing information sources, a soil vapor survey, soil and groundwater sampling, and a hydrogeologic assessment permitted identification of three recognizable areas of the subject property having volatile organic compound (VOC) contamination. Groundwater and soil contamination by VOCs was documented with contaminant sources located in the central portion of the site near Building 53, and below Buildings 40A and 40B. Soil and groundwater contamination which originated from some off-site source to the south also appears to have impacted the subject site. VOC contamination appears to have entered the site from the south under the influence of an induced groundwater flow gradient originating at the Gem City Chemicals facility. Contaminants in groundwater have the potential to migrate off-site toward the Gem City facility.

No contamination by DNAPLs was observed. Groundwater contamination appears restricted to the shallow unconfined aquifer. The semi-confined aquifer does not appear to be affected by VOC contamination at this time. However, available information indicates the potential exists for groundwater to move downward from the unconfined aquifer to the semi-confined aquifer.

Solvents containing chlorinated organic compounds are interpreted to have entered the subsurface environment and penetrated to a depth near the base of the vadose (unsaturated soil) zone. Groundwater in the unconfined aquifer was brought in contact with the contaminated soil allowing contaminants to be released into the groundwater. Groundwater flow in the unconfined aquifer moved the groundwater toward the northeast under the influence of the steepening hydraulic gradient induced by the pumping well at Gem City Chemicals, Inc. The groundwater flowing past the contaminant sources acquired dissolved contaminants and carried the contaminants across the site toward the northeast forming the observed contamination plumes.

As groundwater moved toward the northeast carrying dissolved contaminants from the source locations, the soils in contact with the moving groundwater plumes absorbed some of the contaminants. This formed broad soil contamination plumes and may account for the similarity in location and pattern for both the soil contaminant and groundwater contaminant plumes. Seasonal fluctuations in water levels would be expected to exacerbate this situation over time. Under these conditions, the potential for off-site transport of contaminants is significant over time, first as dissolved groundwater contamination, and secondly as soil contamination near the base of the vadose zone.

The Ohio EPA currently seeks only to prevent significant contamination from reaching nearby public water supply wells through a Well Field Protection Program with Interim Action requirements. Interim Actions for groundwater are the only approved remedial actions which may be undertaken within the Well Field Protection Area. The need for groundwater gradient control is based Ohio EPA defined Interim Standards. If an Interim Standard for groundwater quality is exceeded, Ohio EPA will require the property owner control and remediate contaminated groundwater to prohibit it from leaving the effected property. Fourteen of the twenty-one VOCs detected at the subject site exceed the Interim Standards for those compounds.

Section 1.0 - Introduction and Purpose

Clean Tech is pleased to present our report of findings for the Site Investigation completed at Chrysler Corporation's Dayton Thermal Products Plant (DTPP) in Dayton, Ohio. This plant is part of Chrysler Components, a division of Chrysler Corporation (Chrysler). The site is located at 1600 Webster Street in Dayton, Ohio as shown in Figure 1 (see Volume II of this report). The facility encompasses approximately 60 acres and contains over 1.3 million square feet under roof. Current operations at the facility include the manufacture, assembly, and finishing of heat exchangers and air conditioning components for motor vehicles. The facility consists of eight manufacturing buildings, a powerhouse, wastewater treatment plant, and associated storage buildings.

The facility is presently surrounded by the following industries: Brainerd Industries and Paint America Company on Webster Street, and American Lubricants and Gem City Chemical Company on Air City Avenue. There are several other industries and commercial operations in the near vicinity of the facility (DAP, Inc., Hohman Plating and Manufacturing, Gem City Stamping, Inc., RIS Paper Company, and Angell Manufacturing Company) in addition to private residences. A facility map which provides further details of the site including buildings and other operations is included as Figure 2 (see Volume II of this report).

Past operations at the site prior to Chrysler's acquisition in 1936 included the assembly of Maxwell automobiles from about 1907 through 1936, and other manufacturing processes such as furnaces, gun parts, aluminum and copper tube forming operations, light machining, plating, metal stamping, welding, soldering, degreasing, painting, plastic molding and assembly, as well as maintenance of these processes, equipment and structures. The Maxwell Complex, which was a group of twelve former buildings, was used by Chrysler until 1990 when it was demolished. The Maxwell Complex had been used primarily for storage purposes during the ten to twelve years prior to demolition. A portion of the Maxwell Complex footprint was replaced by the new manufacturing Building 59 in 1991. Investigations completed during the demolition of the Maxwell Complex buildings (prior to the construction of Building 59) indicated that the site may have been impacted by historical manufacturing activities.

This site investigation was completed on behalf of Chrysler by Clean Tech of Newark, Delaware. Specifically, the objectives of the site investigation were as follows:

- Characterize the type and extent of contaminants in the vadose and saturated zones;
- Characterize the extent of dissolved phase contaminants in the groundwater;
- Assess the source of contaminants;
- Evaluate the potential for migration of contaminants off site;
- Obtain site data useful for evaluating remediation technologies; and
- Evaluate potential for contamination due to dense non-aqueous phase liquids (DNAPL).

The site investigation included the following:

- A review of existing information was conducted using sources which included aerial photographs (see Attachment A in Volume II), Sanborn maps, previous reports of limited investigations for the site, and documents describing investigations and remediation at nearby properties;
- A soil vapor survey was conducted to evaluate volatile organic compounds (VOCs) above the water table (vadose zone) for two distinct soil depth zones across the entire DTPP property using an on-site mobile laboratory;
- Soil borings were installed and subsurface soils were described and sampled for laboratory analysis of VOCs and selected metals. The installation of the soil

borings was completed using the results of the soil vapor survey as guidance for boring placement and selection of depth intervals for sampling;

- Monitoring wells were installed and the subsurface soils were described and sampled for laboratory analysis of VOCs and selected metals. The wells were screened at two distinct depths within the unconfined (water table) aquifer, and in the semi-confined aquifer. This was done to determine the nature and extent of groundwater contaminants. Two rounds of groundwater samples were collected for laboratory analysis of VOCs and selected metals;
- Three rounds of water level measurements were collected using the groundwater monitoring wells. This information was used to determine groundwater flow directions across the site with seasonal water level fluctuations noted.

The geophysical logging of an existing on-site water supply well was deleted from the scope of work. The geophysical log was proposed as a method to determine the depth to the confining clay layer separating the water table aquifer and the underlying semi-confined aquifer. This information was needed for the design and installation of the groundwater monitoring wells. The geophysical log became unnecessary since the needed information was obtained through additional research in existing data sources, and through discussions with the subcontracted well installation firm. The well installation firm used for the groundwater monitoring well installations, Moody's of Dayton, is a local business with many years of experience in the Dayton area and is familiar with drilling conditions in and near the site.

Slug testing of the groundwater monitoring wells was attempted, but provided minimal information. The aquifer conditions as encountered in both the unconfined and semi-confined aquifers (extreme permeability) made the slug testing of minimal use as a means of determining representative aquifer characteristics. The slug test findings are included in the report but will not be used in the overall analysis of site conditions.

Section 2.0 - Soil Vapor Survey

The initial field task for the site investigation was the completion of a facility-wide soil vapor survey. The objectives of the soil vapor survey were to:

- Determine the areal extent of contamination by VOCs in the vadose zone;
- Confirm soil vapor survey results from a previous site investigation noting any correlation between elevated readings and potential sources of contaminants;
- Provide a basis for placement of soil borings and groundwater monitoring wells;
- Provide a qualitative evaluation of the potential of using soil venting to remediate vadose zone soils.

2.1 - Sampling and Laboratory Methods

On October 9, 1994 Clean Tech mobilized on-site to begin the soil vapor survey of the site. A Work Plan had been prepared (dated August, 1994) and submitted to Chrysler prior to mobilization. A total of thirty (30) soil vapor sample locations were proposed in the Work Plan. Soil vapor samples were to have been collected from three to eight feet below the ground surface at each location using a hydraulic hammer. The Clean Tech mobile laboratory was also mobilized on-site to provide accurate lab-quality data and rapid analysis of the collected samples.

Clean Tech altered the work plan through the use of a truck mounted Geoprobe subsurface sampling rig. The Geoprobe unit was utilized in order to collect more samples and to provide a better use of manpower and the mobile laboratory. The Geoprobe unit is capable of sampling at greater depths and more quickly than a hydraulic hammer.

The Geoprobe unit was mobilized to sample soil locations on October 10, 1994. The Geoprobe unit drives and withdraws a soil vapor sampling probe. By using Geoprobe, Clean Tech was able to collect soil vapor samples at multiple depths at each location. This soil vapor survey method generated data which assisted in the understanding of the soil vapor contaminant distribution in the vadose zone.

Geoprobe equipment consists of a truck mounted hydraulic probe unit which drives four foot long sections of hollow metal pipe into the subsurface. The metal pipe is approximately one inch in diameter. A new drive point was used for each location. After the metal pipe was driven to the selected depth, Teflon tubing was inserted through the metal pipe and the surface connections were sealed to prevent the entry of atmospheric air. The probe was then extracted approximately one foot to create an open space at the bottom of the driven hole from which a soil vapor sample was collected.

Approximately fifteen to twenty liters of air were evacuated from the open space at the bottom of each driven hole prior to sample collection using a vacuum pump. A vacuum of approximately fifteen to twenty inches of mercury was applied through the Teflon tubing, and a soil vapor sample of approximately five ml was collected in a gas syringe or Tedlar bag. The sample was immediately brought to the Clean Tech mobile laboratory on-site and directly injected into the gas chromatograph (GC).

All samples were analyzed the same day they were collected. Analysis of the soil vapor samples was performed using modified EPA Method 601. The method detection level was 2.0 parts per billion (ppb).

Sample integrity was maintained through quality control procedures completed prior to, during and after sampling and analysis. New Teflon tubing was used for each sample then discarded. All soil vapor sampling equipment in contact with the sample or subsurface was decontaminated using an alconox solution (non-phosphate detergent) followed by a deionized water rinse. Decontamination protocol originally included a methanol rinse but this was found to cause interference in the GC. The use of methanol was therefore discontinued after the first day.

The GC calibration procedures included a system blank and performance of an external calibration curve using known analyte standards at the start of each day prior to analysis of any samples. Ambient air samples were periodically collected during each day through the soil vapor probe, and analyzed to ensure the effectiveness of decontamination procedures. One ambient air blank was analyzed following collection and analysis of every ten soil vapor samples.

Duplicate soil vapor samples were also analyzed as a quality assurance/quality control measure. One duplicate sample was analyzed following collection and analysis of every twenty soil vapor samples. GC calibration was performed at the end of each day following completion of the analysis of all soil vapor samples using a system blank.

2.2 - Sampling Locations

A total of 86 soil vapor samples were collected for analysis from 44 locations across the DTPP property. Daily quality checks of data allowed continuous quality control as the soil vapor survey progressed. Two soil vapor samples, one shallow sample and one deep sample, were collected (or attempted) at each sampling location. The shallow soil vapor sample was collected from approximately ten feet below local grade. The deep soil vapor sample was collected from approximately twenty feet below local grade. Groundwater was typically encountered approximately twenty-five feet below grade. The soil probe occasionally met refusal when advanced, or encountered groundwater shallower than twenty feet, causing an adjustment in sampling depth. The actual sampling depths with a description of each sample location are included in Attachment B (see Volume II of this report).

Soil vapor samples from locations 1 through 20 were collected and analyzed as a reconnaissance sampling effort focused in the eastern and central portions of the facility. The sample locations were relatively closely spaced in the eastern and central portions of the property as can be seen in Drawing 1 (Site Plan) and Drawing 2 (Sample Locations 1 through 48). All drawings are contained in Volume II of this report. These initial soil vapor sample locations served to highlight those areas where focused soil vapor sample collection would provide the best data for accurate determination of contaminant distribution across the entire facility.

The initial samples from locations 1 through 20 were not directly incorporated as contoured data in the soil vapor isoconcentration maps (Drawings 3 through 10) because the data collected from locations 21 through 48 (a total of 49 samples collected from 25 locations) provided good areal coverage of the property. The reconnaissance data and the contoured data qualitatively agreed and in many instances were quite closely spaced in portions of the site. This situation provided both an internal quality check of the data used in the isoconcentration maps, and guidance in establishing the contoured pattern for the data. The soil vapor survey results including: sample numbers, sample locations, sample depths, and the amounts of detected compounds are presented in Attachment C (see Volume II of this report).

2.3 - Findings

The laboratory analysis determined that there were primarily eight volatile organic compounds present in the soil vapor samples, as had been identified in previous investigations. These compounds are listed below with the number of shallow and deep soil vapor samples found to contain the compound above the method detection level. Refer to Attachment C for a summary of the soil vapor results.

Target Compound	Shallow Samples (10')	Deep Samples (20')
1,1,1-trichloroethane (TCA)	16	17
tetrachloroethene (PCE)	22	23
vinyl chloride	14	16
1,1-dichloroethene	1	2
cis-1,2-dichloroethene	3	10
1,2-dichloroethane	5	7

Target Compound	Shallow Samples (10')	Deep Samples (20')
1,1,2-trichloroethane	5	6
1,1-dichloroethane	0	0

Eight isoconcentration contour maps were generated for the soil vapor survey findings based on the available data. Maps were prepared showing: Total VOCs (the sum of all eight compounds), TCA, PCE and vinyl chloride for the shallow soil vapor data, and for the deep soil vapor data. These maps are included as Drawings 3 through 10.

2.3.1 - Contaminant Distribution Patterns

The distribution patterns were examined for each mapped contaminant as they were presented through the isoconcentration contour maps. Shallow and deep vadose zone distribution patterns were developed. These patterns of contaminant distribution were described as follows.

Total VOCs - Shallow Vadose Zone - Drawing 3

The isoconcentration map for total VOCs in the shallow vadose zone was contoured using 50 ppb and 100 ppb contours. The isoconcentration map shows elevated levels of total VOCs were detected in the following areas:

- Within the northern portion of Buildings 40A and 40B, and in the paved area immediately northeast of those buildings;
- In the area of the former TCA tank south of Building 53;
- To the north and east of Building 59;
- In the area near Building 47 extending eastward toward the boiler house;
- In the area north of the boiler house and northeast of Building 47;
- In an isolated area south of Building 59 and west of Building 3A;
- In an isolated area northeast of the wastewater treatment plant.

Total VOCs - Deep Vadose Zone - Drawing 4

The isoconcentration map for total VOCs in the deep vadose zone was contoured using 50 ppb, 100 ppb, and 1,000 ppb contours. The isoconcentration map shows elevated levels of total VOCs were detected in the following areas:

- Within the northern portion of Buildings 40A and 40B, and in the paved area immediately northeast of those buildings;
- In the area of the former TCA tank south of Buildings 50 and 53;
- To the north of Building 59 extending across the vicinity of Building 47;
- In an isolated area south of Building 59 and west of Building 3A;
- In an isolated area south of Building 40 and 40A along Leo Street.

TCA - Shallow Vadose Zone - Drawing 5

The isoconcentration map for TCA in the shallow vadose zone was contoured using 50 ppb and 100 ppb contours. The isoconcentration map shows elevated levels of TCA were detected in the following areas:

- Within the northern portion of Building 40A and in the paved area immediately northeast of that building;
- In the area of the former TCA tank south of Buildings 50 and 53;
- To the south of Building 47 near the waste storage area.

TCA - Deep Vadose Zone - Drawing 6

The isoconcentration map for TCA in the deep vadose zone was contoured using 50 ppb, 100 ppb, and 1,000 ppb contours. The isoconcentration map shows elevated levels of TCA were detected in the following areas:

- Within the northern portion of Building 40A and in the paved area immediately northeast of that building;

- In the area of the former TCA tank south of Buildings 50 and 53;
- In an area extending from north of Building 59 across the south of Building 47 near the waste storage area, and extending to the east near the boiler house.

PCE - Shallow Vadose Zone - Drawing 7

The isoconcentration map for PCE in the shallow vadose zone was contoured using 50 ppb, and 100 ppb contours. The isoconcentration map shows elevated levels of PCE were detected in the following areas:

- In an isolated area south of Building 59 and west of Building 3A;
- Within the northern portion of Building 40A and in the paved area immediately northeast of that building and south of Building 50.

PCE - Deep Vadose Zone - Drawing 8

The isoconcentration map for PCE in the deep vadose zone was contoured using 50 ppb, 100 ppb, and 1,000 ppb contours. The isoconcentration map shows elevated levels of PCE were detected in the following areas:

- In an isolated area south of Building 40 and 40A along Leo Street;
- In the area of the former TCA tank south of Buildings 50 and 53;
- In an isolated area south of Building 59 and west of Building 3A;
- In an area immediately to the north of Building 47;
- Within the northern portion of Building 40A and in the paved area immediately northeast of that building extending north of Building 59.

Vinyl Chloride - Shallow Vadose Zone - Drawing 9

The isoconcentration map for vinyl chloride in the shallow vadose zone was contoured using 50 ppb and 100 ppb contours. The isoconcentration map shows elevated levels of vinyl chloride were detected in the following areas:

- In an isolated area south of Building 59 and west of Building 3A;
- In an isolated area immediately to the southeast of Building 47.

Vinyl Chloride - Deep Vadose Zone - Drawing 10

The isoconcentration map for vinyl chloride in the deep vadose zone was contoured using 50 ppb and 100 ppb contours. The isoconcentration map shows elevated levels of vinyl chloride were detected in the area immediately west of Building 47 near the waste storage area.

2.4 - Discussion

The soil vapor survey revealed the following patterns of contamination in the vadose zone across the DTPP property:

- VOC contamination levels in the vadose zone appear to be greatest in the central portion of the facility in the area to the north of Buildings 40A and 40B, and to the south of Buildings 50 and 53 (former TCA tank area). This pattern was found in both the shallow and deep portions of the vadose zone;
- VOC contamination in the vadose zone was noted at a lesser magnitude yet extends across a larger portion of the facility from north of Building 59 to the area of Building 47 and the associated waste storage area. This pattern was noted for both the shallow and deep portions of the vadose zone, but is much more pronounced in the deep vadose zone;
- Isolated areas of significantly elevated VOCs were noted in the southern portion of the site to the west of Building 3A and south of Building 59, and in the area to the south of Buildings 40 and 40A. This pattern was noted for both the shallow and deep portions of the vadose zone, but was found to be much more pronounced in the deep vadose zone;

- Larger amounts of VOC contamination with greater areal extent of VOC contamination were noted in the deep vadose zone as compared to the shallow vadose zone.

These findings are in close agreement with the work completed during previous soil investigations at the DTPP facility. The areas near Buildings 40A and 40B, the area to the south of Building 53 near the former TCA tanks, the area east of Building 50, and the western and southern portions of the former Maxwell Complex are identified as areas where elevated levels of VOCs may be expected in vadose zone soils.

The soil vapor survey permitted identification of recognizable areas of the DTPP property having a particular pattern of VOC contamination in the vadose zone. These areas were evaluated and are presented as reference areas for discussion of a working model of the site conditions. This model is presented for use in discussions of soil and groundwater contamination patterns, and identification of potential contamination sources. Refer to Figure 3 (see Volume II of this report) for a map of the facility showing these areas.

<u>Area A</u>

Area A was characterized as the central portion of the facility in the area to the north of Buildings 40A and 40B, and to the south of Buildings 50 and 53 (former TCA tank area). Area A exhibits a pattern of significantly elevated levels of total VOCs, TCA and PCE in both the shallow and deep portions of the vadose zone.

<u>Area B</u>

Area B was characterized as the east-central portion of the facility from the northern limit of Building 59 northward across the area of Building 47 and the associated waste storage area. Overall VOC contamination in the vadose zone appeared at a lesser magnitude in Area B than in Area A, but extended across a larger portion of the property in Area B. VOC contamination in Area B was noted for both the shallow and deep portions of the vadose zone, but was found to be more pronounced in the deep vadose zone. Area B exhibits a pattern of significantly elevated levels of total VOCs in both the shallow and deep vadose zones, TCA in the deep vadose zone, and PCE in the deep vadose zone.

Area C

Area C was characterized as isolated areas of significantly elevated VOCs in the southern portion of the site to the west of Building 3A, south of Building 59, and south of Buildings 40 and 40A. Area C exhibited a pattern of significantly elevated levels of total VOCs and PCE in both the shallow and deep portions of the vadose zone, with elevated levels of vinyl chloride in the shallow vadose zone to the west of Building 3A. VOC contamination was noted for both the shallow and deep portions of the vadose zone, but was much more pronounced in the deep vadose zone.

Significantly elevated levels of VOCs in the deep vadose zone across the property in close proximity to the local water table clearly suggested groundwater contamination may have occurred. The soil vapor survey results provided a guide for placement of the soil borings and groundwater monitoring wells, and a qualitative evaluation showing the potential exists for using soil venting to remediate vadose zone soils.

Section 3.0 - Soil Borings

The purpose of the soil borings was to observe and describe site stratigraphy, sample the vadose soil zone and analyze soils for the contaminants of concern, and determine the extent of contaminated soils in the vadose zone at the site. The selection of the soil boring locations, creation of a work plan for soil sample collection, and the selection of the target analytes for laboratory analysis was based on the review of available information, and information received from Chrysler Corporation environmental staff.

The results of previous investigations indicated vadose zone soils have been impacted by TCE, TCA, PCE and some heavy metal contamination (chromium and lead). The areas which may have been impacted include:

- Building 40B in the area of the former Freon-113 degreaser station;
- South side of Building 53 in the area of the former TCA storage tanks;
- Buildings 40A and 40B which contained former parts degreasers;
- West and southwest of the former Maxwell Complex or present Building 59;
- Storage areas located east of Building 50.

3.1 - Soil Boring Locations

The selection of the soil boring locations was based on the results of the previous investigations, existing information sources, and current soil vapor survey information which served as guidance for boring placement and selection of depth intervals for sampling. Drilling locations were also dependent on access restrictions due to operations of the facility, and underground and above ground utilities. Existing utilities were located and marked by Chrysler personnel. All drilling locations were pre-approved by appropriate DTPP personnel who assured each location was at least ten feet from underground utilities or structures, and that a twenty-foot minimum distance was maintained from above ground utilities.

The soil vapor survey proved a valuable guide to achieving optimum placement of the soil borings. Three areas were defined through the soil vapor survey which displayed patterns of shallow and deep vadose zone contamination by organic compounds. Refer to Figure 3 for a map of the facility showing these areas. Area A was characterized as the central portion of the facility which consists of an area to the north of Buildings 40A and 40B, and to the south of Buildings 50 and 53 (former TCA tank area). Area B was characterized as the east-central portion of the facility from the northern limit of Building 59 northward across the area of Building 47 and the associated waste storage area. Area C was characterized as isolated areas of significantly elevated VOCs in the southern portion of the site to the west of Building 3A, south of Building 59, and south of Buildings 40 and 40A.

On October 17, 1994 Clean Tech mobilized on-site to begin the soil boring installations. A Work Plan and site-specific Health and Safety Plan (HASP) were prepared and submitted to Chrysler Corporation's environmental activities staff prior to the start of drilling. Ten (10) soil borings were proposed and installed at the site.

Soil borings 3, 4, 6 and 8 were placed in Area A, soil borings 1, 2, 5 and 7 were placed in Area B, and soil borings 9 and 10 were placed in Area C. Drawing 11 shows the locations of the soil borings and the areas of contamination defined through the soil vapor survey.

3.2 - Installation Methods

The soil borings were installed using the hollow stem auger drilling method. Drilling was performed by Moody's of Dayton, a local business with many years of drilling experience in the Dayton area, and familiar with subsurface conditions in and near the site. Each borehole was advanced using a CME 75 truck mounted hollow stem auger drilling rig. All soil borings were completed using 4.25" diameter I.D. augers. The soil borings were each advanced to the water table, which was typically encountered at approximately 25 to 30 feet below ground surface (BGS). Soil samples were collected at five foot intervals as each boring was advanced using a standard penetration test with split spoon sampler. The general procedures for drilling and soil sampling activities are presented in Attachment D (see Volume II of this report).

Each soil sample was tested using a hydrophobic dye for the presence of non-aqueous phase liquid. This was a qualitative screening test performed in the field at the time the sample was collected which could detect both light (LNAPL) and dense non-aqueous phase liquids (DNAPL) if present.

Field personnel maintained a field logbook with documentation of all pertinent information about field activities and samples, including sample identification information as included on the sample labels and chain of custody forms. Entries in the logbook were made in ink and included a description of field activities; names of project individuals; date, time, and any field measurement information.

A geologic log was generated for each soil boring. These logs included the depth of the boring, sampled intervals, sample identification and sample recovery, standard penetration test results (blow counts), descriptions of the samples, air monitoring measurements for the breathing zone, borehole and split spoon samples, and the results of the dye test for non-aqueous phase liquids. The geologic logs for the ten soil borings are included as Attachment E (see Volume II of this report).

3.2.1 - Waste Disposal Methods

The installation of the soil borings generated soil cuttings as waste materials. A total of ten soil borings were installed as per the Work Plan. The soil cuttings were placed in drums, labeled and staged on-site. A total of 143 drums of soil cuttings were generated during the combined soil boring and well installation activities.

As described in the Work Plan, the drilling cuttings generated during the soil boring installations were screened for organic vapor emissions using a PID. No free phase product was observed in any of the drilling cuttings. No organic vapor readings were measured which exceeded the action level of 50 ppm described in the HASP for any of the borings. The laboratory analytical results for the soil samples collected from the soil borings do not show significantly elevated levels of VOCs for any of the soil samples. Based on these findings, Chrysler Corporation will move the drummed soil cuttings to an area of the facility near the existing soil stock piles, and spread and grade the soil level on the ground surface as soon as possible.

3.3 - Soil Sampling and Analysis Methods

The soil samples collected from the soil borings were examined in the field, and laboratory analyzed for targeted chemical analysis, and geotechnical evaluation of the subsurface materials. A generalized guide to soil sample depth selection was based on the soil vapor survey.

For soil borings located near the center of areas of elevated soil vapor measurements, a sample was collected for chemical analysis from the split spoon sample having the highest observed PID readings. For soil borings located near the edge of areas of elevated soil vapor measurements, a sample was collected for chemical analysis from the split spoon sample below any elevated PID readings, or at the top of the water table, whichever was encountered first as the boring was advanced.

Geotechnical analysis was performed as an aid to identify applicable remedial technologies for the vadose zone. The geotechnical samples were selected as representative samples of the subsurface materials encountered, and at depths in the borings where an engineered remedial technology might be applied to the vadose zone.

3.3.1 - Chemical Analysis

Chemical analysis of soil samples from the soil borings consisted of quantitative field analysis using the photoionization detector, qualitative field analysis using hydrophobic dye, and laboratory analysis for volatile organic compounds, total organic carbon and metals.

<u>Photoionization Detector</u>

The soil samples were analyzed immediately upon opening the split spoon sampler using an HNu photoionization detector. The PID measured the levels of total volatile organic compounds and reported those measurements as parts per million (ppm) equivalent of the calibration gas, isobutylene. Results typically ranged from background (BG as reported in the geologic logs) for ambient air levels, to under 10 ppm total volatile organic compounds for the majority of the samples. Those samples with measured PID values of 10 ppm or greater are listed below:

Boring	Depth	PID	Comment
SB-3	14-16 ft	10 ppm	Sample approximately 10 ft above water table.
SB-5	19-21 ft	10 ppm	Sample approximately 5 ft above water table.
SB-5	29-31 ft	10 ppm	Sample approximately 5 ft below water table.
SB-7	14-16 ft	10 ppm	Sample approximately 10 ft above water table.
SB-9	19-21 ft	15 ppm	Sample approximately 5 ft above water table.
SB-10	29-31 ft	15 ppm	Sample approximately 5 ft below water table.

<u>Field Analysis Dye Test</u>

The hydrophobic dye test was performed using each sample collected. The results are summarized below for those samples yielding positive dye test results. All other soil boring samples yielded negative results for the dye test.

Boring	Depth	Comment
SB-5	29-31 ft	Sample approximately 5 feet below water table. PID slightly elevated at 10 ppm in sample.
SB-9	19-21 ft	Sample approximately 5 feet above water table. PID slightly elevated at 15 ppm in sample.

Laboratory Analysis

One soil sample from each soil boring was collected and analyzed for the Target Compound List (TCL) volatile organic compounds (VOCs), and the Target Analyte List (TAL) metals. The TCL VOCs list includes 69 targeted organic compounds. Analysis was performed using EPA Method 8260. The TAL metals list includes 18 targeted metals. Analysis was performed using EPA Methods 6010/7000 and 7421 (lead by furnace). Metals analysis was performed as follows:

- ICP analysis for aluminum, barium, beryllium, cadmium, calcium, chromium (total), cobalt, copper, silver, sodium, vanadium, and zinc;
- Furnace analysis for antimony, arsenic lead, selenium, and thallium;
- Mercury analysis by cold vapor.

These lists provide a selection of targeted analytes which might be present based on the available information. One soil sample was collected and analyzed for total organic carbon (TOC) using EPA Method 9060. This was done as a preliminary design step to assist with the determination of possible remedial technologies. The sample collected for TOC analysis was selected as representative of the subsurface materials encountered. Soil samples collected for laboratory analysis are listed below:

Boring	Depth	Analysis Performed
SB-1	9-11 ft	TCL VOCs, TAL Metals
SB-2	19-21 ft	TCL VOCs, TAL Metals
SB-3	14-16 ft	TCL VOCs, TAL Metals
SB-4	14-16 ft	TCL VOCs, TAL Metals, TOC
SB-5	29-31 ft	TCL VOCs, TAL Metals
SB-6	14-16 ft	TCL VOCs, TAL Metals
SB-7	24-26 ft	TCL VOCs, TAL Metals
SB-8	24-26 ft	TCL VOCs, TAL Metals
SB-9	19-21 ft	TCL VOCs, TAL Metals
SB-10	29-31 ft	TCL VOCs, TAL Metals

Quality Assurance and Quality Control

The Quality Assurance/Quality Control (QA/QC) program for chemical analysis of soil samples (both for the soil borings and groundwater monitoring wells) consisted of the collection and analysis of duplicate samples, spiked samples, and equipment blanks. The purpose of this program was to ensure the analyses performed by the analytical laboratory are reproducible. The chain of custody documentation, any QA/QC sample analytical results and the laboratory results for the soil boring samples are included as Attachment F (see Volume III of this report). The QA/QC program for chemical analysis of soil samples is included as Attachment G (see Volume II of this report).

3.3.2 - Geotechnical Analysis

Geotechnical analysis of selected soil samples was performed as an aid in determining applicable remedial technologies. Samples were selected for geotechnical analysis based on their representativeness of the subsurface materials encountered, and at a depth in the boring where an applicable remedial technology might be applied.

The Work Plan submitted to Chrysler proposed a total of six soil samples to be collected from the soil borings for geotechnical analysis. These samples were to have been collected from the vadose zone and analyzed for particle-size distribution, porosity, permeability, and percent moisture.

The Work Plan was altered in response to site conditions as encountered during the initial phase of drilling. The coarse granular nature of the subsurface materials precluded the planned use of large (three-inch O.D.) split spoons for collection of the geotechnical samples. Minimal sample could be retained in the large split spoon sampler. Additionally, any soil samples collected using a split spoon were so disturbed as to make porosity and permeability measurements less than reliable, regardless of the size or type of sampler used.

Geotechnical samples were collected from the soil borings using a two-inch O.D. split spoon sampler. The soil samples were collected in clean glassware and submitted to Tetra Tech Richardson of Newark, Delaware for textural gradation analysis and percent moisture content. Soil samples collected from the soil borings for laboratory analysis are listed below:

Boring	Depth	Analysis Performed
SB-1	14-16 ft	% Moisture
SB-2	14-16 ft	% Moisture
SB-3	19-21 ft	% Moisture
SB-5	14-16 ft	Textural Gradation, % Moisture
SB-6	19-21 ft	Textural Gradation, % Moisture
SB-10	14-16 ft	Textural Gradation, % Moisture

Quality Assurance and Quality Control

The Quality Assurance/Quality Control (QA/QC) program for geotechnical analysis of soil samples (both the soil borings and the groundwater monitoring wells) specified laboratory test procedures which followed ASTM procedures or approved equivalent methods for analysis of textural gradation and percent moisture. The QA/QC program for geotechnical analysis of soil samples is included as Attachment G (see Volume II of this report). The results of the geotechnical analysis for the samples collected from the soil borings are included as Attachment H (see Volume III of this report).

Section 4.0 - Groundwater Monitoring Wells

The groundwater monitoring wells were installed to satisfy two objectives. One objective of the groundwater monitoring wells, similar to the soil borings, was to observe and describe site stratigraphy, sample the vadose soil zone for laboratory analysis, and determine the extent of contaminated soils in the vadose zone at the site. The selection of the well locations and soil sampling depths was augmented by the soil boring information as well as previous site investigations, existing information sources and the soil vapor survey findings.

The other objective of the groundwater monitoring wells was to install a total of fifteen wells, twelve in the unconfined aquifer and three in the semi-confined aquifer, which would allow groundwater samples and water-level measurements to be obtained at points across the site in the unconfined and semi-confined aquifers. A total of three well pairs, each pair having one well screened in the unconfined aquifer and one well screened in the semi-confined aquifer, were installed to assess vertical hydraulic gradients at the site.

4.1 - Groundwater Monitoring Well Locations

The selection of the monitoring well locations was completed using the results of the previous site investigations, existing information sources, and the findings of the soil vapor survey and soil borings. This information guided well placement and selection of depth intervals for soil sampling.

Drilling locations were also dependent on access restrictions due to operations of the facility, and underground and above ground utilities. Existing utilities were located and marked by Chrysler personnel. All drilling locations were pre-approved by appropriate DTPP personnel who confirmed each location was at least ten feet from underground utilities or structures, and that a twenty-foot minimum distance was maintained from above ground utilities.

On October 17, 1994 Clean Tech mobilized on-site to begin installation of the groundwater monitoring wells. A Work Plan and site-specific Health and Safety Plan (HASP) were prepared and submitted to Chrysler prior to the start of drilling. A total of fifteen monitoring wells were proposed and installed at the site. Twelve wells were installed in the unconfined aquifer and three wells were installed in the semi-confined aquifer. The wells installed in the unconfined aquifer were installed in two depth ranges within the aquifer. This was done to assess the unconfined aquifer for the possible presence of DNAPLs.

Wells designated MWA were installed in the upper portion of the saturated zone. Total depths for these wells range from 39 to 45 feet BGS, approximately 15 feet below the top of the saturated zone (water table). Wells designated MWB were installed in the lower portion of the saturated zone. Total depths range from 54 to 90 feet BGS. Wells designated MWC were installed in the semi-confined aquifer as paired wells with MWB wells. The total depths for the MWC wells range from 84 to 122 feet BGS. The MWC wells were installed in the upper portion of the semi-confined aquifer.

Three areas were identified and delineated through the soil vapor survey which displayed patterns of shallow and deep vadose zone contamination by organic compounds. Refer to Figure 3 for the locations of these areas. <u>Area A</u> was characterized as the central portion of the facility in the area to the north of Buildings 40A and 40B, and to the south of Buildings 50 and 53 (former TCA tank area). <u>Area B</u> was characterized as the east-central portion of the facility from the northern limit of Building 59 northward across the area of Building 47 and the associated waste storage area. <u>Area C</u> was characterized as isolated areas of significantly elevated VOCs in the southern portion of the site to the west of Building 3A, south of Building 59, and south of Buildings 40 and 40A.

Groundwater monitoring wells MWA-2, MWA-3 and MWB-6 were placed in <u>Area A</u>, wells MWA-1, MWA-5, MWB-2 and MWC-2 were placed in <u>Area B</u>, and wells MWA-4, MWB-3 and MWC-3 were placed in Area C. Groundwater monitoring wells MWA-6, MWB-1, MWB-4, MWB-5 and MWC-1 were located near the property boundary corners and separated from the identified contaminant areas. This provided coverage of the site as a whole, allowed determination of background water quality for groundwater flowing on to the site, and made data collection possible in additional areas of potential contamination. Drawing 12 shows the locations of the groundwater monitoring wells and the areas of contamination defined through the soil vapor survey.

4.2 - Installation Methods

The shallow groundwater monitoring wells in the unconfined aquifer were installed using the hollow stem auger drilling method. The deeper wells in the semi-confined aquifer were installed using the cable tool drilling method. Drilling was performed by Moody's of Dayton, a local business with many years of drilling experience in the Dayton area.

Soil samples were collected at five-foot intervals as each hollow stem auger boring was advanced using a standard penetration test with split spoon sampler. Soil samples were examined from the cable tool rig when the boring was bailed, and split spoon samples were collected from the confining unit (till layer) and from the portion of the semi-confined aquifer where the well screen was set. The general procedures for drilling and soil sampling activities are presented in Attachment D (see Volume II of this report).

Each soil sample was tested using a hydrophobic dye for the presence of non-aqueous phase liquid. This was a qualitative screening test performed in the field at the time the sample was collected which could detect both light (LNAPL) and dense non-aqueous phase liquids (DNAPL) if present.

Field personnel maintained a field logbook with documentation of all pertinent information about field activities and samples, including sample identification information as included on the sample labels and chain of custody forms. Entries in the logbook were made in ink and included a description of field activities; names of individuals involved; date, time, and any field measurement information.

A geologic log was generated for each groundwater monitoring well. These logs include: the depth of the boring, sampled intervals, sample identification, sample recovery, standard penetration test results (blow counts), descriptions of the samples, air monitoring measurements for the breathing zone, borehole and split spoon samples, the results of the dye test for non-aqueous phase liquids, and well construction details. The geologic logs for the groundwater monitoring wells are included as Attachment I (see Volume II of this report).

Unconfined Aquifer Wells

A total of twelve wells were installed in the unconfined aquifer in two depth ranges. This was done to assess the shallow and deeper portions of the unconfined aquifer for both dissolved phase contaminants and the presence of DNAPLs. Analytical results at the Gem City, Inc. site immediately east of DTPP indicated higher VOC concentrations were present in the shallow portion of the unconfined aquifer.

Wells designated MWA were installed in the shallow portion of the saturated zone. Total depths for these wells range from 39 to 45 feet BGS, approximately 15 feet below the top of the saturated zone (water table). The water table is anticipated to fluctuate between ten and fifteen feet during the year. Wells designated MWB were installed in the deeper portion of the saturated zone immediately above the confining layer (till layer). Total depths range from 54 to 90 feet BGS. MWB-4 was completed at a more shallow depth (35 feet) due to conditions encountered during well installation.

Each shallow well boring was advanced using a CME 75 truck mounted hollow stem auger drilling rig. The borings were completed using 4.25" or 6.25" diameter I.D. augers.

The larger augers were used whenever site conditions allowed. Soil sampling was performed using procedures as presented in Attachment D.

Each well was constructed inside the hollow stem augers using two-inch diameter PVC casing and ten feet of 10 slot two-inch diameter PVC well screen. After insertion of the casing and screen, sand pack (Global Filter Pack #5) was poured to approximately two feet above the top of the well screen as the augers were withdrawn. An approximately three-foot thick bentonite seal was installed above the sand pack. The bentonite seal was allowed to hydrate and expand prior to placement of the grout. The remaining annular space was grouted using a positive pressure tremmie pipe. Care was taken to avoid disturbing the bentonite seal during grout placement. The grout mixture was allowed to cure before installation of flush mounted locking well covers.

Semi-Confined Aquifer Wells

Three groundwater monitoring wells were installed targeting the semi-confined aquifer below the confining layer (till layer). These wells were designated MWC as presented in the geologic logs (see Attachment I). MWC-1 was double-cased, and MWC-2 and MWC-3 were triple-cased to prevent groundwater migration between the unconfined aquifer and the semi-confined aquifer. The borings for the semi-confined aquifer wells were advanced using a BE22-W cable tool drilling rig.

The boring for MWC-1 was advanced and eight-inch diameter steel casing was driven through the unconfined aquifer to approximately five feet below the top of the till layer. The till consisted of clay with variable amounts of sand and gravel. The boring was then advanced through the till layer and a split spoon sample of the till was collected from two feet below the top of the till layer for lithologic description. Split spoon samples of the semi-confined aquifer were collected from the interval to be screened for lithologic description, and six-inch diameter steel casing was installed to the total depth of 112 feet BGS.

The MWC-1 well was constructed inside the six-inch casing using two-inch diameter PVC casing and ten feet of 10 slot two-inch diameter PVC well screen. The well screen was set from 102 to 112 feet BGS. The top of the well screen was positioned approximately six feet below the base of the till layer. After insertion of the casing and screen, sand pack (Global Filter Pack #5) was poured to approximately two feet above the top of the well screen as the six-inch casing was withdrawn from the boring. An approximately three-foot thick bentonite seal was installed above the sand pack. The bentonite seal was allowed to hydrate and expand prior to placement of the grout. The remaining annular space was grouted using a positive pressure tremmie pipe. Care was taken to avoid disturbing the bentonite seal during grout placement. The grout mixture was allowed to cure before installation of a flush mounted locking well cover.

The boring for MWC-2 was advanced and twelve-inch diameter steel casing was driven through the unconfined aquifer to approximately two feet below the top of the till layer where it was grouted in place. A split spoon sample of the till was collected from two to four feet below the top of the till layer for lithologic description. The boring was then advanced into the till layer and eight-inch diameter steel casing was driven to approximately eight feet below the top of the till layer where it was grouted in place. The boring was advanced through the till layer, and split spoon samples of the semi-confined aquifer were collected from the interval to be screened for lithologic description. Six-inch diameter steel casing was installed to the total depth of 122 feet BGS.

The MWC-2 well was constructed inside the six-inch casing using two-inch diameter PVC casing and ten feet of 10 slot two-inch diameter PVC well screen. The well screen was set from 112 to 122 feet BGS. The top of the well screen was positioned approximately ten feet below the base of the till layer. After insertion of the casing and screen, sand pack (Global Filter Pack #5) was poured to approximately two feet above the top of the well screen as the six-inch casing was withdrawn. The six-inch casing was withdrawn to nineteen feet above the top of the screen (into the till layer) where it jammed and was grouted in place. An approximately three-foot thick bentonite seal was installed above the sand pack. The bentonite seal was allowed to hydrate and expand prior to placement of the grout. The remaining annular space was grouted using a positive pressure tremmie pipe. Care was taken to avoid disturbing the bentonite seal during grout placement. The grout mixture was allowed to cure before installation of a flush mounted locking well cover.

The boring for MWC-3 was advanced and twelve-inch diameter steel casing was driven through the unconfined aquifer to approximately two feet below the top of the till layer where it was grouted in place. A split spoon sample of the till was collected from two to four feet below the top of the till layer for lithologic description. The boring was then advanced into the till layer and eight-inch diameter steel casing was driven to approximately four feet below the top of the till layer where it was grouted in place. The boring was advanced through the till layer, and split spoon samples of the semi-confined aquifer were collected in the interval to be screened. Six-inch diameter steel casing was installed to the total depth of 84 feet BGS.

The MWC-3 well was constructed inside the six-inch casing using two-inch diameter PVC casing and ten feet of 10 slot two-inch diameter PVC well screen. The well screen was set from 74 to 84 feet BGS. The top of the well screen was positioned approximately five feet below the base of the till layer. After insertion of the casing and screen, sand pack (Global Filter Pack #5) was poured to approximately two feet above the top of the well screen as the six-inch casing was withdrawn from the boring. An approximately three-foot thick bentonite seal was installed above the sand pack. The bentonite seal was allowed to hydrate and expand prior to placement of the grout. The remaining annular space was grouted using a positive pressure tremmie pipe. Care was taken to avoid disturbing the bentonite seal during grout placement. The grout mixture was allowed to cure before installation of a flush mounted locking well cover.

Soil sampling for the semi-confined aquifer wells was performed following the procedures presented in Attachment D.

Well Development

Each monitoring well was developed after installation to restore the natural hydraulic properties of the aquifer and facilitate free hydraulic connection between the aquifer and the well. Well development was performed by surging the screened interval and pumping the well. Field measurements were collected including conductivity, pH, and temperature. Water turbidity was monitored.

Each well was developed until the measured parameters stabilized, and the water pumped from the well was relatively turbidity-free. The wells were each developed for a period of approximately thirty to sixty minutes. Approximately 200 to 350 gallons of water were pumped from each well during the development process.

4.2.1 - Waste Disposal Methods

The installation and sampling of the groundwater monitoring wells generated soil cuttings and groundwater as waste materials. A total of fifteen groundwater monitoring wells were installed and sampled as per the Work Plan. The soil cuttings were placed in drums, labeled and staged on site. A total of 143 drums of soil cuttings were generated during the combined soil boring and well installation activities.

A total of approximately 3,630 gallons of water were pumped from the wells during the well development process. Additionally, the wells were each purged of at least three wellbore volumes of water prior to the collection of each round of groundwater samples producing a total of approximately 525 gallons of purge water.

Soil Cuttings

As described in the Work Plan, the drilling cuttings were screened for organic vapor emissions using a PID. No free phase product was observed in any of the drilling cuttings. No organic vapor readings were measured for the breathing zone or borehole which exceeded the action level of 50 ppm as described in the HASP for any of the wells. The laboratory analytical results for the soil samples do not show significantly elevated levels of VOCs for any of the soil samples. Based on these findings, Chrysler Corporation will move the drummed soil cuttings to an area of the facility near the existing soil stock piles, and spread and grade the soil level on the ground surface as soon as possible.

<u>Water</u>

As described in the Work Plan, drilling fluids, well development water, purge water, and decontamination fluids generated by field investigation activities were screened for organic vapor emissions using the PID. No free phase product was observed in any of the produced water, however, organic vapor readings from these fluids were occasionally found to exceed the action level of 50 ppm as described in the HASP. Therefore, in accordance with the Work Plan, all drilling fluids, well development water, and decontamination fluids were temporarily containerized at the well head and transferred to the on-site wastewater treatment plant for final disposal at the time of well installation and development.

Purge water generated during purging of the wells prior to collection of both rounds of groundwater samples was drummed and staged at the well head. The laboratory analytical results for the groundwater samples do not show significantly elevated levels of VOCs for any of the groundwater samples. No free phase product was observed in any of the produced water, however, organic vapor readings from the purge water as measured during the first round of groundwater sampling were occasionally found to exceed the action level of 50 ppm as described in the HASP. Therefore, in accordance with the Work Plan, Chrysler Corporation will move all of the drummed purge water to the on-site wastewater treatment plant for final disposal as soon as possible.

4.3 - Soil Sampling and Analysis Methods

The soil samples collected from the groundwater monitoring wells were examined in the field, and laboratory analyzed for targeted chemical analysis and geotechnical evaluation of the subsurface materials. A generalized guide to soil sample depth selection was formed based on the soil vapor survey, and the site conditions encountered during the soil boring installations.

For wells located near the center of areas of elevated soil vapor measurements, a soil sample was collected from the split spoon sample having the highest observed PID readings. For wells located near the edge of areas of elevated soil vapor measurements, a soil sample was collected from the split spoon sample below any elevated PID readings or at the top of the water table, whichever was encountered first as the boring was advanced.

4.3.1 - Chemical Analysis

Chemical analysis of the soil samples from the groundwater monitoring wells consisted of quantitative field analysis using the photoionization detector, qualitative field analysis using hydrophobic dye, and laboratory analysis for volatile organic compounds, total organic carbon and metals.

Photoionization Detector

The soil samples were analyzed immediately upon opening the split spoon sampler using an HNu photoionization detector. The PID measured the levels of total volatile organic compounds and reported those measurements as parts per million equivalent of the calibration gas, isobutylene. Results typically ranged from background (BG as reported in the geologic logs) for ambient air levels to under 10 ppm total volatile organic compounds for the majority of the samples. Those samples with measured PID values of 10 ppm or greater are listed below:

Well	Depth	PID	Comment
MWA-1	19-21 ft	10 ppm	Sample approximately 5 ft above water table.
MWA-1	24-26 ft	10 ppm	Sample approximately 1 ft above water table.
MWA-1	34-36 ft	15 ppm	Sample approximately 10 ft below water table.
MWA-2	14-16 ft	10 ppm	Sample approximately 10 ft above water table.
MWA-2	19-21 ft	12 ppm	Sample approximately 5 ft above water table.
MWA-3	24-26 ft	12 ppm	Sample approximately 5 ft below water table.
MWA-3	29-31 ft	70 ppm	Sample approximately 3 ft below water table.
MWA-3	34-36 ft	70 ppm	Sample approximately 8 ft below water table.
MWA-4	19-21 ft	50 ppm	Sample approximately 5 ft above water table.
MWA-4	24-26 ft	75 ppm	Sample approximately at water table.
MWA-4	29-31 ft	80 ppm	Sample approximately 5 ft below water table.
MWA-4	34-36 ft	80 ppm	Sample approximately 10 ft below water table.
MWA-4	39-41 ft	100 ppm	Sample approximately 15 ft below water table.
MWA-4	44-46 ft	60 ppm	Sample approximately 20 ft below water table.
MWB-3	34-36 ft	15 ppm	Sample approximately 8 ft below water table.
MWB-3	44-46 ft	20 ppm	Sample approximately 18 ft below water table.
MWB-6	24-26 ft	14 ppm	Sample approximately at water table.

Field Analysis Dye Test

The hydrophobic dye test was performed using each sample collected. The results are summarized below for those samples yielding positive dye test results, suggesting the presence of non-aqueous phase liquids. All other soil samples from the groundwater monitoring wells yielded negative results for the dye test.

Well	Depth	Comment
MWA-4	24-26 ft	Sample approximately at water table. PID elevated at 75 ppm in sample.
MWB-1	69-71 ft	Sample approximately 50 feet below water table. Possible natural oil from overlying clay unit.
MWB-2	64-66 ft	Sample approximately 40 feet below water table. Possible natural oil from overlying clay unit.
MWB-2	69-71 ft	Sample approximately 45 feet below water table. Possible natural oil from overlying clay unit.
MWB-2	74-76 ft	Sample approximately 50 feet below water table. Possible natural oil from overlying clay unit.
MWB-2	79-81 ft	Sample approximately 55 feet below water table. Possible natural oil from overlying clay unit.
MWB-2	84-86 ft	Sample approximately 60 feet below water table. Possible natural oil from overlying clay unit.
MWB-2	89-91 ft	Sample approximately 65 feet below water table. Possible natural oil from overlying clay unit.
MWB-3	39-41 ft	Sample approximately 15 feet below water table. Possible natural oil from underlying clay unit.
MWB-3	54-56 ft	Sample approximately 30 feet below water table. Possible natural oil from underlying clay unit.
MWB-5	39-41 ft	Sample approximately 10 feet below water table. Possible natural oil from clay unit.
MWB-5	49-51 ft	Sample approximately 20 feet below water table. Possible natural oil from clay unit.
MWB-5	54-56 ft	Sample approximately 25 feet below water table. Possible natural oil from clay unit.
MWB-5	59-61 ft	Sample approximately 30 feet below water table. Possible natural oil from clay unit.
MWB-5	64-66 ft	Sample approximately 35 feet below water table. Possible natural oil from clay unit.
MWB-5	67-71 ft	Sample approximately 40 feet below water table. Possible natural oil from clay unit.
MWB-5	74-76 ft	Sample approximately 45 feet below water table. Possible natural oil from clay unit.
MWB-5	79-81 ft	Sample approximately 50 feet below water table. Possible natural oil from clay unit.
MWB-5	84-86 ft	Sample approximately 55 feet below water table. Possible natural oil from clay unit.
MWB-5	89-91 ft	Sample approximately 60 feet below water table. Possible natural oil from clay unit.
MWB-6	39-41 ft	Sample approximately 15 feet below water table. Possible natural oil from underlying clay unit.
MWB-6	44-46 ft	Sample approximately 20 feet below water table. Possible natural oil this clay unit.

Laboratory Analysis

Soil samples were collected from the monitoring well borings and analyzed for TCL VOCs, and TAL metals. The TCL VOC list analysis was performed using EPA Method

8260. The TAL Metals list analysis was performed using EPA Methods 6010/7000 and 7421 (lead by furnace). Metals analysis was performed as follows:

- ICP analysis for aluminum, barium, beryllium, cadmium, calcium, chromium (total), cobalt, copper, silver, sodium, vanadium, and zinc;
- Furnace analysis for antimony, arsenic lead, selenium, and thallium;
- Mercury analysis by cold vapor.

Four soil samples were collected and analyzed for total organic carbon (TOC) using EPA Method 9060. The samples collected for TOC analysis were selected as representative of the subsurface materials encountered. Soil samples collected for laboratory analysis are listed below:

Well	Depth	Analysis Performed
MWA-1	24-26 ft	TCL VOCs, TAL Metals
MWA-2	19-21 ft	TCL VOCs, TAL Metals
MWA-3	24-26 ft	TCL VOCs, TAL Metals
MWA-4	24-26 ft	TCL VOCs, TAL Metals
MWA-5	24-26 ft	TCL VOCs, TAL Metals
MWA-6	24-26 ft	TCL VOCs, TAL Metals
MWB-1	49-51 ft	TOC
MWB-2	24-26 ft	TCL VOCs, TAL Metals
MWB-3	24-26 ft	TCL VOCs, TAL Metals, TOC
MWB-4	19-21 ft	TCL VOCs, TAL Metals, TOC
MWB-5	24-26 ft	TCL VOCs, TAL Metals, TOC
MWB-6	24-26 ft	TCL VOCs, TAL Metals

Quality Assurance and Quality Control

The Quality Assurance/Quality Control (QA/QC) program for chemical analysis of soil samples (both for the soil borings and the groundwater monitoring wells) consisted of the collection and analysis of duplicate samples, spiked samples, and equipment blanks. The purpose of this program was to ensure the analyses performed by the analytical laboratory are reproducible. The chain of custody documentation, any QA/QC sample analytical results and the laboratory results for the soil samples collected from the groundwater monitoring wells are included as Attachment J (see Volume III of this report). The QA/QC program for chemical analysis of soil samples is included as Attachment G (see Volume II of this report).

4.3.2 - Geotechnical Analysis

Geotechnical analysis of selected soil samples was performed to assist with the identification of possible remedial technologies. Samples were selected for geotechnical analysis based on their representativeness of the subsurface materials encountered, and at a depth in the boring where a possible remedial technology might be applied.

The Work Plan submitted to Chrysler proposed a total of six soil samples to be collected from the soil borings only. None were to have been collected from the monitoring well borings. Samples were to have been collected from the vadose zone and analyzed for particle-size distribution, porosity, permeability, and percent moisture. Three Shelby tube samples were to have been collected from the confining layer (till layer) during installation of the wells in the semi-confined aquifer. The Shelby tube samples were to have been analyzed for permeability using a constant head permeability test for granular soils.

The Work Plan was altered in response to site conditions encountered during drilling. The coarse granular nature of the subsurface materials precluded the planned use of large (three-inch O.D.) split spoons for collection of the geotechnical samples. Any soil samples collected using a split spoon were found to be so disturbed as to make porosity and permeability measurements less than reliable. Representatives of the well drilling firm, Moody's of Dayton, reported that their previous experiences attempting Shelby tube samples in the till layer were unsuccessful. Shelby tubes typically crush when pushed into the stiff clay and gravel of the till. If a Shelby tube was crushed in a boring advanced using the cable tool drilling method, there is no reliable way to recover it. The boring would then need to be grouted and abandoned, and the well installation started again.

Geotechnical samples were collected from the monitoring well borings using either a two-inch or three-inch O.D. split spoon sampler. The soil samples were collected in clean glassware and submitted to Tetra Tech Richardson of Newark, Delaware for textural gradation analysis. Soil samples collected from the groundwater monitoring well borings are listed below:

Well	Depth	Analysis Performed
MWA-4	39-41 ft	Textural Gradation
MWA-5	34-36 ft	Textural Gradation
MWB-2	74-76 ft	Textural Gradation
MWC-1	104-106 ft	Textural Gradation
MWC-2	114-116 ft	Textural Gradation
MWC-3	76-78 ft	Textural Gradation

Quality Assurance and Quality Control

The Quality Assurance/Quality Control (QA/QC) program for geotechnical analysis of soil samples (both the soil borings and the groundwater monitoring wells) specified laboratory test procedures which followed ASTM procedures or approved equivalent methods for textural gradation analysis. The results of the geotechnical analysis are included as Attachment K (see Volume III of this report). The QA/QC program for geotechnical analysis of soil samples is included as Attachment G (see Volume II of this report).

4.4 - Groundwater Sampling and Analysis Methods

Groundwater samples were collected from each of the fifteen groundwater monitoring wells during two sampling events. The wells were sampled twice to determine if there are any effects on water quality due to seasonal water level fluctuations. The first sampling event was completed in December, 1994 and the second was completed in February,

1995. Both groundwater sampling events were performed using Clean Tech's standard sampling procedures.

Groundwater samples were collected and analyzed for TCL VOCs and TAL metals. Chromium analysis was performed using total chromium as the target analyte. Chromium VI analysis was not performed for the groundwater samples because the sample holding times were in excess of 24 hours.

Each well remained static for approximately two weeks following well development to allow the portion of the aquifer disturbed during the well installations to equilibrate. All wells were screened for evidence of organic vapors prior to collection of the first round of groundwater samples in December 1994 using a PID. The PID was inserted into the open well top immediately upon opening the well. The PID measurement was recorded in the field logbook. The wells were not screened for evidence of organic vapors at the time of the second round of groundwater samples in February 1995 because the ambient air temperature was so low during that time as to render the PID ineffective as an air monitoring tool. Water levels were measured from the top of the PVC casing prior to well purging. An interface probe was used to measure water levels and the thickness of any non-aqueous phase product (LNAPL or DNAPL) prior to purging the well in preparation for groundwater sampling. The water levels and notes regarding any non-aqueous phase product were recorded for both sampling rounds.

All wells were purged prior to sample collection to obtain a representative groundwater sample. Each well was purged of at least three wellbore volumes of water prior to sample collection. The groundwater sample collection procedures are presented in Attachment L (see Volume II of this report).

Quality Assurance and Quality Control

The Quality Assurance/Quality Control (QA/QC) program for chemical analysis of groundwater consisted of the collection and analysis of duplicate samples, and equipment and trip blanks. The purpose of this program was to ensure the analyses performed by the analytical laboratory are reproducible. The chain of custody documentation, any QA/QC sample analytical results and the laboratory results for the groundwater samples are included as Attachment M (Round #1) and Attachment N (Round #2), and are presented in Volume III of this report. The QA/QC program for chemical analysis of groundwater samples is included as Attachment O (see Volume II of this report).

4.4.1 - Water Level Measurements

Water level measurements were collected at each groundwater monitoring well on a monthly basis for a period of three months after completion of the wells. Three rounds of water level measurements were collected to observe temporal variations in groundwater levels during the reporting period. The depth to water in each monitoring well was measured from the top of the PVC well casing. The PVC well casing tops were surveyed for each monitoring well and referenced to a standard elevation, thereby allowing computation of the reference elevation for the water level in each well.

All soil borings and monitoring well tops (top of PVC casing) were surveyed for vertical and horizontal control by a State of Ohio licensed surveyor. The survey was performed using a site specific local coordinate system for horizontal control which tied surveyed traverses to the on site buildings, and a United States Geologic Survey benchmark located at the intersection of Webster and Leo Street for vertical control referenced to feet above mean sea level. Elevations were measured to the nearest 0.01 foot.

Water-level measurements were obtained at the time of the first groundwater sampling event on December 13-14, 1994, on January 24, 1995, and at the time of the second groundwater sampling event on February 20, 1995. Water level measurements were collected from each monitoring well prior to the beginning of purging and groundwater sample collection. Piezometric surface maps for the unconfined aquifer are included as Drawings 22, 23, and 24. All Drawings are included in Volume II of this report.

The water level measurements were collected using the following procedure. All sampling team members wore new and clean disposable gloves during measurements at each well to protect team members from exposure to potentially contaminated groundwater, and to minimize the potential for cross-contamination between wells. The lock was removed from the locking well cap just prior to measuring. While standing upwind, the well cap was removed and the well was allowed to vent. The permanent measurement reference point was then located on the PVC well casing.

The decontaminated two-phase interface probe was lowered into the well to the static water level. The well was inspected for the presence of any LNAPL which might be presence as a layer on top of the static water level. No LNAPL layers were detected in any wells during any of the three water level measurement events. The monitoring well number and the distance from the permanent reference point to the static water level were recorded to the nearest 0.01 foot in the bound log book. The static water elevation was computed and recorded in the bound log book. This value is the elevation of the measured reference point minus the depth to the water in the well.

The interface probe was then lowered to the bottom of the well to inspect the well for the possible presence of a DNAPL layer (a different audible signal will sound if the interface probe contacts a non-water fluid). No DNAPL was detected in any well during any of the three water level measurement events. The elevation of the bottom of the well was computed and recorded in the bound log book. This value is the elevation of the measured reference point minus the depth to the bottom of the well. The two-phase interface probe was then removed from the well, and decontaminated. The measurement tape and probe were wiped along its entire length, discarding and replacing the towels as they became soiled. Field decontamination of the interface probe was accomplished by washing the instrument using a phosphate-free detergent followed by a potable water rinse. The equipment was then rinsed using deionized water and allowed to air dry.

Section 5.0 - Geology

The geology of the Chrysler DTPP facility is discussed as a means of understanding the nature of the subsurface and its influence on potential contaminant migration pathways. The discussion of the regional geology of the Dayton area provides a reference framework. It was prepared from published reports and available site investigations obtained for nearby properties. The site geology was further examined through information gathered during installation of the soil borings and groundwater monitoring wells, with additional information obtained from the records of the water supply wells located on the property.

5.1 - Regional Geology

The regional geology of the Dayton, Ohio area has been examined and discussed by several authors. Original publications by Norris, (1959), and Walton and Scudder, (1960) were reviewed. Site investigations by QSource Engineering, Inc., (1993) for the Gem City Chemicals, Inc. facility, and by Mathes & Associates, (1991) for the DTPP property incorporate these and several additional previous studies. The regional geology of the area has been summarized here from these information sources.

The regional geologic setting of the Dayton, Ohio area consists of glacial and glacial-fluvial (outwash stream) sediments deposited over an irregular bedrock surface. Highly permeable calcareous sands and gravel fill pre-glacial or glacial valleys eroded into the underlying bedrock. These permeable glacial deposits are believed to be outwash deposits originating from retreating glaciers. The permeable deposits have formed shallow and deeper aquifers separated by low permeability confining layers. The confining layers are till layers composed primarily of clay with mixtures of gravel, sand, and silt.

The bedrock underlying the glacial sediments is believed to consist of relatively impermeable materials. It is mapped as the Ordovician Richmond Group, and is thought to be composed of soft, light gray, calcareous shale with interbedded layers of limestone. Few wells in the region have reached the bedrock surface, which is estimated to be 250 to 300 feet BGS in most areas. The bedrock yields little to no water, provides little recharge to the overlying aquifers, and acts as an impervious lower and lateral boundary to the overlying aquifers.

Regional studies of the glacial and glacial-fluvial deposits have shown the uppermost recognizable geologic unit is a sand and gravel outwash deposit approximately 80 feet thick. This unit is typically recognized as the unconfined aquifer. Discontinuous till layers have been encountered within this unit at depths between 40 and 50 feet BGS.

The unconfined aquifer is generally underlain by a till layer present at approximately 80 feet BGS. This till layer appears to be laterally persistent, but may absent from some locations in the region due either to non-deposition or erosion. Till layers have been reported as massive clay units, or as zones of alternating clay with stratified sand and gravel. Till layers act as confining layers which control aquifer recharge and regional groundwater flow.

Till layers are known to contain significant amounts of natural hydrocarbons. The well drillers were quick to recognize the natural hydrocarbon as it was encountered in clays within the unconfined aquifer, and from the till underlying the unconfined aquifer. The hydrocarbon was a dark brown liquid found as non-aqueous phase product. It was noted in drilling cuttings, when bailing during cable tool drilling, and during examination of soil samples. The State of Ohio Geological Survey was consulted regarding the hydrocarbon and confirmed the hydrocarbon is a natural material found throughout the region. The Survey noted a major oil company had recently studied the viability of hydrocarbon production from till layers in the region.

Regional studies indicate that a second recognizable sand and gravel outwash deposit underlies the till layer found at approximately 80 feet BGS. This lower aquifer behaves as a confined or semi-confined aquifer. However, if the till layer is thin or absent the hydraulically connected sand and gravel units act as a single unconfined aquifer.

Deep wells in the region suggest discontinuous till layers may exist within the second glacial outwash unit (the semi-confined aquifer), and additional semi-confined or confined aquifers exist at greater depths. These deeper aquifers are believed to be separated by till layers in much the same way as the shallower geologic units. Deeper aquifers were not examined in this investigation.

5.2 - Site Geology

The site geology was examined through information gathered during installation of the soil borings and groundwater monitoring wells, with additional information obtained from the records of the production wells located on the property. Refer to Drawings 11 and 12 for locations of the soil borings and monitoring wells in Volume II of this report. Refer to Attachments E and I (see Volume II of this report) for geologic logs containing descriptions of the materials found in the soil borings and monitoring wells. Geologic cross-sections were prepared using the information contained in the boring logs, specifically differentiating the subsurface units containing significant amounts of clay from the more permeable gravel and sand units. A map showing the locations of the geologic cross-sections is included as Figure 4, and the three geologic cross-sections are included as Drawings 25, 26, and 27 in Volume II of this report.

The site geology as determined from information obtained from the borings and wells consists primarily of sand and gravel with minor amounts of silt and clay. These are the glacial and glacial-fluvial sediments typical of the region. The sand and gravel is interbedded with till and clay layers composed of massive clay units, or zones of clay with sand and gravel. The uppermost two to four feet is typically a disturbed clay-bearing material which is absent in many places, probably due to site development activities. None of the borings or wells reached the bedrock surface.

The uppermost geologic unit at the site is a sand and gravel outwash deposit approximately 75 to 90 feet thick. This is the unconfined aquifer. Clay units, and units composed of clay, sand and gravel mixtures were encountered within the unconfined aquifer. Several of these units are laterally persistent suggesting they might exert some local control over potential contaminant migration pathways. Additional clay-bearing units were noted in the unconfined aquifer, but were restricted to certain small areas of the site. The more laterally persistent clay-bearing units within the unconfined aquifer are summarized as follow:

Clay Units Within the Unconfined Aquifer

Depth of Clay-Bearing Unit	Well or Boring Encountering Clay-Bearing Unit
4-6 ft	SB-1, SB-6 (to 11' BGS), SB-9, MWA-5, MWA-6, MWB-1 (to 16' BGS), MWB-4 (to 16' BGS), MWB-5
19-21 ft	SB-2 (to 26' BGS) , SB-8, SB-10 (to 26' BGS), MWA-3, MWA-4, MWA-5 (to 26' BGS), MWB-3, MWC-3
29-31 ft	SB-4, SB-6, SB-10, MWB-6, Production Well #4
34-75 ft	MWB-4
39- 41 ft	MWA-2, MWA-3, MWB-2 (to 51')
64 ft -	MWB-1 (to 76' BGS), MWB-2 (to 81' BGS), MWB-5 (to 90' BGS)

A persistent till layer was encountered which was interpreted as forming the confining layer between the unconfined aquifer and the underlying semi-confined aquifer. The thickness of the till was 20 feet in MWC-1, 23 feet in MWC-2, 14 feet in MWC-3, 15 feet in Production Well #3, and 25 feet in Production Well #4. The approximate depth to the top of the till layer as seen in the deeper wells is listed below:

Depth to Confining Layer at Base of Unconfined Aquifer

Well	Depth to Till at Base Unconfined Aquifer
MWB-1, MWC-1	76 feet BGS
MWB-2, MWC-2	85 to 89 feet BGS
MWB-3, MWC-3	56 to 57 feet BGS
MWB-5	90 feet BGS
MWB-6	44 feet BGS
Production Well #3	85 feet BGS
Production Well #4	80 feet BGS

The semi-confined aquifer was encountered below the till layer in MWC-1, MWC-2, and in Production Wells #3 and #4. It consists of sand and gravel with minor amounts of fine-grained material, much like the unconfined aquifer. These materials are glacial and glacial-fluvial sediments typical of the region. The monitoring wells penetrated approximately 20 feet of the uppermost portion of the unit. No clay-bearing units were noted in the portion of the semi-confined aquifer examined. Drillers logs for Production Wells #3 and #4 describe the unit as coarse grained sand and gravel. A till layer was encountered in Production Well #3 between 128 and 129 feet BGS.

Section 6.0 - Hydrogeology

The hydrogeology of the Chrysler DTPP facility is presented to gain an understanding of potential subsurface contaminant transport mechanisms. Groundwater flow behavior and aquifer properties form the hydraulic framework for an understanding of the documented pattern of contamination at the site. Regional and site hydrogeology are discussed.

6.1 - Regional Hydrogeology

The regional hydrogeology of the Dayton area has been discussed by several authors. Original publications by Norris, (1959), and Walton and Scudder, (1960) were reviewed, along with site investigations by QSource Engineering, Inc., (1993) for the Gem City Chemicals, Inc. facility, and by Mathes & Associates, (1991) and Clean Tech, (1994) for the subject property.

The regional geologic setting of the Dayton, Ohio area consists of highly permeable calcareous sands and gravel deposited in pre-glacial or glacial valleys eroded into the underlying bedrock. These glacial deposits form shallow and deeper aquifers separated by low permeability confining layers (glacial till) composed primarily of clay with mixtures of gravel, sand, and silt. The bedrock materials are of low permeability and act to form lateral and lower boundaries to the flow of groundwater through the permeable materials.

Regional studies of the permeable deposits have shown the uppermost recognizable hydrogeologic unit is a sand and gravel deposit approximately 80 feet thick which is recognized as the unconfined aquifer. Discontinuous till layers have been encountered within this unit which act as local confining layers. The hydraulic conductivity of the shallow aquifer is approximately 200 feet per day with a transmissivity reported to be approximately 15,000 to 40,000 square feet per day (QSource Engineering, Inc.).

Studies completed by Dames & Moore in 1991, and reviewed by Clean Tech, 1994 for the DAP site which is located about four miles north of this site, included an aquifer recovery test which monitored drawdown in the monitoring wells and piezometers surrounding the pumping well. Transmissivity values in the range of 249,000 gallons per day per foot to 747,000 gallons per day per foot were reported. The transmissivity appears to generally be lower in the shallow part of the aquifer and increases with depth.

The lithology of the deeper aquifer is very similar to the shallow aquifer. Based on reports prepared for Gem City Chemicals, the saturated thickness of the deep aquifer is approximately 60 feet thick. Hydraulic conductivity values range from 140 to 200 feet per day. Reported transmissivity ranges from 1,200 to 12,000 square feet per day. The reported storage coefficient of 0.001 is within the expected range for a confined aquifer.

Values for the aquifer parameters developed by CH_2M Hill for the development of the Miami South Well Field were reviewed by Clean Tech, 1994:

<u>Upper Aquifer</u>

Hydraulic Conductivity	-	0.003 ft/sec (260 ft/day, 2021 GPD/ft^2)
Storativity	-	0.2 ft/ft

<u>Till Layers</u>

Hydraulic Conductivity	-	0.44 x 10^{-6} ft/sec (0.04 ft/day, 0.3 GPD/ft^2)
Storativity	-	0 ft/ft

<u>Lower Aquifer</u>

Hydraulic Conductivity	-	0.001 ft/sec (87 ft/day, 710 GPD/ft^2)
Storativity	-	0.00001 ft/ft

The analysis assumed a 50 foot thick saturated zone in the upper aquifer, and variable thickness for the till and lower aquifer. The transmissivity values were not calculated directly. All values were calculated assuming that each of the layers were homogeneous and isotropic. Due to the directions of flow that were calculated, the calculated hydraulic conductivities are likely to reflect the horizontal conductivity in the "upper" and "lower" aquifers, and the vertical conductivity through the till. Considerable local variability from these values is likely across the region.

During the pump test conducted at Gem City Chemicals, Inc. on February 21, 1990, the recovery well was pumped at a rate of 340 gpm and the water level in the piezometer installed 3.5 feet away from the pumping well was monitored. The drawdown was 0.75 feet after 450 minutes of pumping. This gives a reported value for transmissivity of 52,900 square feet per day or 395,000 gallons per day per foot, and a hydraulic conductivity of 0.226 centimeters per second (755 ft/day). This value is about three times the average value calculated from the regional studies.

Based on these values, the pre-pumping groundwater flow velocity was estimated to be about 1.2 feet per day. The current flow velocity in the area surrounding the pumping well is estimated to be 6.4 feet per day. The potentiometric surface elevations have been measured in the two well clusters located at the northeastern and southwestern limits of Gem City Chemicals, Inc. The levels measured in the three wells in each cluster are similar, which indicated that the groundwater flow is nearly level at both locations.

Due to the presence of the till layer separating the valley fill deposits into "upper" and "lower" aquifer systems, the direction of groundwater flow was evaluated separately at Gem City Chemicals for each of the two layers. As described previously, a low-permeability till layer is present beneath Gem City Chemicals, Inc. and for at least one-half mile surrounding the site. This till layer effectively isolates the uppermost, unconfined aquifer at Gem City Chemicals, Inc. from deeper confined aquifers.

Ground-water flow directions in the lower aquifer have changed considerably during the past thirty years, due to changes in water usage in the surrounding areas. Clean Tech, 1994 reported that potentiometric maps compiled by Norris & Spiker for 1959 and 1960 (prior to the time when the Miami South Well Field began operations) show groundwater flow to the southwest, toward a wide cone of depression developed beneath the central business district of Dayton, and also toward industrial facility water supply wells to the southwest. A major cone of depression developed beneath the South Miami Well Field following the beginning of water production from the well field in the early 1960's. Maps compiled by CH_2M Hill for 1972 show this cone of depression. The location of Gem City Chemicals, Inc. appeared to be on or near a groundwater divide between these two cones of depression, and the direction of groundwater flow at the DTPP site was thought to be either to the north or to the south, or it could fluctuate depending on recharge variations and variability in the pumping rates at the city's well field.

In August of 1988, the City of Dayton adopted a Well Field Protection Program to protect its drinking water supplies. The southern limit of the Miami Well Field Protection Overly District is Stanley Avenue, which borders the DTPP property. Well yields for wells within the area as published in Norris & Spiker (1966) range from 20 gallons per minute (No. 209) to a maximum of 1,000 gallons per minute (No. 212), as reported by Clean Tech, 1994. A test well in the South Miami Well Field pumped at a rate of 2,283 gallons per minute. The City's Mad River Well Field is approximately two miles to the east of the site and does not receive any recharge from this area as reported by QSource Engineering.

The unconfined aquifer has been widely utilized as a water source throughout the region. The main source of groundwater recharge to the unconfined aquifer is infiltration from local rivers. Direct recharge by precipitation, and recharge by subsurface flow from the edges of buried valleys provide lesser amounts of recharge to the aquifer. Available annual precipitation is higher during the months of March through June in the Dayton region.

Wells constructed in portions of the aquifer having a substantial saturated thickness may yield up to 1,000 gallons per minute (gpm) for a short period of time, although yields of

100 gpm to 500 gpm are more common. The presence of thick layers of till within the aquifer has been shown to decrease these short-term yields up to 50%. Areas having thin deposits of sand and gravel, such as locations near the edges of the buried valleys, have been shown to yield substantially less water.

The unconfined aquifer is generally underlain by a till layer present at approximately 80 feet BGS. This till layer appears to be laterally persistent across areas on the order of a mile, but evidence suggests it may be discontinuous on a larger regional scale across the entire buried valley in the Dayton region. The till has been found to be absent from some locations in the region due either to non-deposition or erosion.

Till layers have been reported as massive clay units, or as zones of alternating clay with stratified sand and gravel. Till has been shown to have low permeability and yields little water to wells. It has been used as a local aquifer for domestic or farm water supply wells (up to 12 gpm) near the edges of the buried valley deposits when sand and gravel content are high within the till.

Till layers generally act as confining layers, controlling aquifer recharge and creating barriers to groundwater flow. Norris examined recharge to the aquifer underlying a regional till layer and found that leakage through the confining layer was responsible for the majority of the groundwater recharge to the lower aquifer. This leakage was not assumed to represent a breach in the till layer, but rather uniform transmission of water through the till under a hydraulic gradient. A leakage coefficient was computed for the till of 0.003 gallons per day per cubic foot.

Regional studies indicate that a second recognizable sand and gravel outwash deposit underlies the till layer found at approximately 80 feet BGS. This lower aquifer behaves as a confined or semi-confined aquifer. However, if the till layer is thin or absent the hydraulically connected sand and gravel units will act as a single unconfined aquifer. This second recognizable sand and gravel deposit is the semi-confined aquifer examined during this investigation.

The semi-confined aquifer is utilized as a major water source throughout the region for municipal supplies. The main source of groundwater recharge to the semi-confined aquifer is the overlying unconfined aquifer. Wells constructed in the semi-confined aquifer have routinely yielded 2,000 gpm for extended periods of time. Chemical quality of the water from the unconfined and semi-confined aquifers has been shown to be similar by Walton and Scudder, 1960.

Deep wells in the region suggest discontinuous till layers may exist within the second glacial outwash unit (the semi-confined aquifer), and additional semi-confined or confined aquifers exist at greater depths. These deeper aquifers are believed to be separated by till layers in much the same way as the shallower geologic units.

6.2 - Site Hydrogeology

The hydrogeology of the site was examined through information gathered from groundwater monitoring wells, with additional information obtained from the records of the production wells located on the property. The hydrogeology of the site is typical of the region. The permeable subsurface materials consist of glacial and glacial-fluvial sediments made up of sand and gravel with minor amounts of silt. The sand and gravel is interbedded with till and other clay layers composed of massive clay units, or zones of clay with sand and gravel. Two aquifers were examined in this investigation: the shallow unconfined aquifer and the deeper semi-confined aquifer.

Slug Testing

Hydraulic conductivity testing was attempted following collection of the first round of groundwater samples on December 15 and 16, 1994. The planned hydraulic conductivity testing employed slug testing techniques. A slug test consists of causing a water-level change within a well and measuring the rate at which the water level returns to its initial level. This rate of recovery can be related to the hydraulic conductivity of the surrounding aquifer material.

Approximately one gallon of deionized water was added to the wells. The volume of water added was chosen to displace an equal volume of water equivalent to approximately five feet of standing water in the well. The slug tests were conducted using a digital data logger and pressure transducer. All equipment in contact with the well or groundwater was decontaminated using a solution of ten percent methanol in potable water. The length of the transducer cable and the probe were wiped clean using the methanol solution, discarding and replacing the towel as it became soiled, and rinsed using deionized water.

Slug testing of the groundwater monitoring wells was attempted, but provided minimal information. The aquifer materials encountered in both the unconfined and semi-confined aquifers were recognized to have extreme permeability and porosity when first described during the well and boring installations. Published reports indicate these aquifers can have porosity values up to approximately 35%, and transmissibility of approximately 280,000 gallons per day per foot in the Dayton area. This extreme permeability as encountered at the site made the slug testing method minimally effective as a means of determining representative aquifer characteristics.

6.2.1 - Unconfined Aquifer

The hydrogeology of the unconfined aquifer was investigated through analysis of water level elevations, interpretation of groundwater flow direction and gradients, examination of the relationship between the water level measurements and confining units as encountered in the wells, and the pattern of contamination as observed in the groundwater and soil across the site.

Trichloroethene - Drawing 15

The isoconcentration map for trichloroethene was contoured using 50 ppb, 100 ppb, 500 ppb, 1,000 ppb and 5,000 ppb contours. The isoconcentration map shows elevated levels of trichloroethene were detected in the soils in the following areas:

- Area A: within the northern portion of Buildings 40A and 40B; in the paved area immediately north of those buildings; and in the area of the former TCA tank south of Building 53;
- Area B: in the area to the west of Building 47 with contamination noted to a lesser degree than seen in Area A or Area C;
- Area C: along the southern portion of the site adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40, 40A and 40B.

The soil sample results and interpreted distribution of contaminants revealed the following patterns of contamination in the soil across the Chrysler Corporation property:

- The levels of tetrachloroethylene in the soil appear to be greatest in the central portion of the facility within Area A and Area B. The distribution of the tetrachloroethylene controls the total VOCs distribution pattern in this portion of the site. The affected areas are within the northern portion of Buildings 40A and 40B; in the paved area immediately north and east of those buildings; in the area of the former TCA tank south of Building 53; to the north of Building 59; in the area near Building 47 extending northward and toward the east; and in the area north of the boiler house and northeast of Building 47;
- The levels or trichloroethene in the soil appear to be greatest along the southern portion of the site within Area C. The distribution of the trichloroethene controls the total VOCs distribution pattern in this portion of the site. The affected area is adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40, 40A and 40B.

These findings are in agreement with the work completed during previous soil investigations at the facility, and with the soil vapor survey completed as a part of this investigation. The soil vapor survey permitted identification of recognizable areas of the site having a particular pattern of VOC contamination in the vadose zone. These areas (Area A, B, C) were presented as a working model of the site conditions useful in the discussion of soil contamination patterns, and identification of potential contamination sources.

The areas near Buildings 40A and 40B, the area to the south of Building 53 near the former TCA tanks, the area east of Building 50, and the western and southern portions of the former Maxwell Complex are identified as areas where elevated levels of VOCs are present in the soil. Significantly elevated levels of VOCs have been identified in the soil in close proximity to the local water table.

Chemical Analysis: Metals

The laboratory analysis detected the following metals in the soil samples from the soil borings and the monitoring well borings. The results are listed in the following tables.

Soil Metals for Soil Boring Samples

Metals	SB-1 @ 9'	SB-2 @ 19'	SB-3 @ 14'	SB-4 @ 14'	SB-5 @ 29'	SB-6 @ 14'	SB-7 @ 24'	SB-8 @ 24'	SB-9 @ 19'	SB-10 @ 29'
Aluminum	1600	1400	1900	1900	1700	1800	1500	1900	1600	1400
Barium	7.2	12	11	11	12	11	12	11	8	9.6
Beryllium	ND	ND	ND	0.22	ND	ND	ND	ND	ND	ND
Cadmium	0.65	0.63	0.58	0.67	0.53	0.72	0.73	0.47	0.72	0.46
Calcium	140,000	110,000	130,000	260,000	130,000	100,000	140,000	110,000	77,000	70,000
Chromium	7.1	6.9	6.9	5.6	8.7	5	4.5	6.8	5.2	4.8
Cobalt	ND	ND	ND	4.6	ND	ND	ND	ND	ND	ND
Silver	3.9	3.1	3.6	2.7	3.3	3.2	2.8	2.9	3	2.4
Copper	2.2	8.9	8.7	8.7	8	9.7	10	7.2	8.1	8.1
Sodium	280	140	190	200	210	210	180	160	290	140
Vanadium	ND	ND	ND	8.2	ND	ND	ND	ND	ND	ND
Zinc	16	18	20	16	14	17	24	16	19	22
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	4.8	4.3	5.6	3	16	5.4	6.4	6.5	5.2	3
Lead	2	2	2	2	3	2.4	2.5	4.1	1.6	2.8
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	1.2	1.3	0.8	1.7	1.4	1.8	1.2	1.1	1.3	0.94
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Metals in Soil Samples from Soil Borings.
All Results in Parts per Million (mg/kg).
ND denotes analyte was not detected at the laboratory detection levels.

Soil Metals for Monitoring Well Boring Samples

Metals	MWA1 @ 24'	MWA2 @ 19'	MWA3 @ 24'	MWA4 @ 24'	MWA5 @ 24'	MWA6 @ 24'
Aluminum	2300	2300	3300	1900	1800	2300
Barium	12	13	11	15	9	14
Beryllium	0.099	0.21	0.26	ND	0.1	ND
Cadmium	0.3	0.71	0.78	0.66	0.68	0.71
Calcium	93,000	220,000	90,000	100,000	150,000	100,000
Chromium	7.4	9	7.1	6.4	7.9	5
Cobalt	5.7	4.9	4.1	2.6	5.4	2.8
Silver	3.7	2.7	3.3	2.1	4.2	2
Copper	9	9.6	7.3	11	8.7	11
Sodium	140	150	120	140	190	120
Vanadium	9.7	9.6	8.7	5.6	8.7	5.4
Zinc	17	19	20	23	15	19
Antimony	ND	ND	ND	ND	ND	ND
Arsenic	6.5	4.4	5.6	2.6	2.5	4.2
Lead	4	3.2	3.3	3.2	3.5	3
Selenium	ND	ND	ND	ND	ND	ND
Thallium	2	1.9	0.9	0.82	2.6	0.61
Mercury	ND	ND	ND	ND	ND	ND

Metals in Soil Samples from Monitoring Wells. All Results in Parts per Million (mg/kg).
ND denotes analyte was not detected at the laboratory detection levels.

Soil Metals for Monitoring Well Boring Samples

Metals	MWB2 @ 24'	MWB3 @ 24'	MWB4 @ 24'	MWB4 @ 19'	MWB5 @ 24'	MWB6 @ 24'
Aluminum	2100	1500	2000	1900	2100	2900
Barium	12	12	14	13	10	10
Beryllium	0.088	0.3	0.23	0.21	0.27	0.28
Cadmium	0.62	0.68	0.62	0.67	0.55	0.77
Calcium	83,000	140,000	190,000	260,000	73,000	100,000
Chromium	7.2	6.8	6.5	6.2	6.3	7
Cobalt	5.1	8.2	4.4	4.8	8.3	4.4
Silver	3.7	3.1	2.5	2.5	2.7	3.1
Copper	10	12	8.8	9.1	9.1	8.1
Sodium	140	190	160	130	170	130
Vanadium	9.5	9.5	7.4	8.6	11	8
Zinc	22	19	18	18	22	18
Antimony	ND	ND	ND	ND	ND	ND
Arsenic	7.1	6	4.1	4.1	8.4	3.5
Lead	3.5	3	4.6	4.5	3.3	2.6
Selenium	ND	ND	ND	ND	ND	ND
Thallium	2	4.6	1.6	1.6	2.1	0.75
Mercury	ND	ND	ND	ND	ND	ND

Metals in Soil Samples from Monitoring Wells. All Results in Parts per Million (mg/kg).
ND denotes analyte was not detected at the laboratory detection levels.

The detected metal species were compared to the mean concentrations of those metals occurring naturally in soils of the Eastern United States (includes Ohio). This information was compiled by the United States Geological Survey and presented in the 1984 publication Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States , Professional Paper 1270, by Shacklette and Boerngen. A summary of this comparison is presented in the following table.

Comparison of Mean Metals Concentration and Sample Concentrations

Metals Species	Concentration Range (# Samples)	Eastern US Mean (Includes Ohio)
Aluminum	1400-2900 ppm (all)	5.7 %
Barium	7.2 - 15.0 ppm (all)	420 ppm
Beryllium	0.099-0.3 ppm (10 of 21)	0.85 ppm
Cadmium	0.3-0.78 ppm (all)	None Given
Calcium	70,000-260,000 ppm (all)	0.65 %
Chromium	4.5-9.0 ppm (all)	52 ppm
Cobalt	2.6-8.3 ppm (12 of 21)	9.2 ppm

Metals Species	Concentration Range (# Samples)	Eastern US Mean (Includes Ohio)
Silver	2.0-4.2 ppm (all)	None Given
Copper	2.2-12.0 ppm (all)	22 ppm
Sodium	120-290 ppm (all)	0.78 %
Vanadium	5.4-11.0 ppm (12 of 21)	66 ppm
Zinc	14-24 ppm (all)	52 ppm
Antimony	All Not Detected	-----
Arsenic	2.5-16.0 ppm (all)	7.4 ppm
Lead	1.6-4.6 ppm (all)	17 ppm
Selenium	All Not Detected	-----
Thallium	0.61-4.6 ppm (all)	None Given
Mercury	All Not Detected	-----

A total of eighteen metals species were targeted for analysis. Three of the targeted metals were below detectable levels in the samples. Thirteen metals were found to be within the Eastern United States mean values for those metals. Two metals were found to be present at levels significantly above the Eastern United States mean values. Calcium was measured in the range between 7 % and 26 % for all the soil samples. This range is well above the Eastern United States mean value of 0.65 %, but within the expected range for calcium in the Dayton, Ohio area because the sands and gravels underlying the area are known to be calcareous sediments, that is, made up of calcium-bearing minerals. Arsenic was measured in the range between 2.5 ppm and 16.0 ppm. The Eastern United States mean value is 7.4 ppm, however, the observed range of naturally occurring arsenic was reported up to 73 ppm for the Eastern United States.

Three metals, cadmium, silver, and thallium, were not assigned mean values in the referenced report. Common ranges for cadmium and silver were compiled by Dragun, 1988 and were compared to the analyzed samples. Cadmium concentrations were between 0.3 and 0.78 ppm for all samples which is within the common range reported for cadmium of 0.01 to 7.0 ppm. Silver concentrations were within the range of 2.0 to 4.2 ppm for all samples which is within the common range reported for silver of 0.1 to 5.0 ppm. Thallium was detected in all samples at concentrations in the range of 0.61 to 4.6 ppm.

Chemical Analysis: TOC

Soil samples were collected and analyzed for TOC. The samples collected for TOC analysis were selected as representative of the subsurface materials encountered. Laboratory results for the TOC analysis are listed below:

Total Organic Carbon in Soil Samples

SB-4 @ 30'	MWB1 @ 49'	MWB3 @ 49'	MWB4 @ 49'	MWB5 @ 49'
35,000	17,000	100	18,000	21,000

TOC in Soil Samples.
All Results in Parts per Million (mg/kg).

Organic carbon typically exists in a variety of oxidation states. Some of these carbon compounds can be oxidized further by biological or chemical processes. TOC provides a direct expression of the total organic content of the sample independent of the oxidation state of the organic matter. TOC does not measure other organically bound elements that can contribute to the total oxygen demand during the oxidation process.

The TOC concentrations in the range of 17,000 to 35,000 ppm indicate significant organic carbon is available to be oxidized further by biological or chemical processes. The relatively low concentration of TOC found in MWB-3 @ 49' indicates relatively little organic carbon is available for biological or chemical oxidation in that sample.

QA/QC

The QA/QC program for chemical analysis of the soil samples consisted of the collection and analysis of duplicate samples, spiked samples, and equipment blank. Two duplicate soil samples were collected and analyzed as was done for all soil samples. MWA-7 is a duplicate sample of MWB-2 from 24'. MWB-7 is a duplicate of MWB-4 from 19'. Soil samples were spiked in the laboratory, analyzed and the results were retained at the laboratory in their records retention system. One equipment blank was collected by pouring deionized water over the decontaminated sampling equipment and collecting the rinsate for laboratory analysis. The rinsate water sample was identified as MWA-5-24. No VOCs were detected in the equipment blank sample indicating the decontamination of the equipment was thorough and no cross-contaminants were introduced to the samples.

The detected VOCs and targeted metals in the duplicate sample pairs are presented in the following table. Overall reproducibility of the laboratory results between the duplicate samples showed that sample handling did not appear to introduce any significant variability in the results.

Duplicate Soil Sample Pairs

Duplicate Samples	MWB2 @ 24'	MWA7	% Difference	MWB4 @ 19'	MWB7	% Difference
tetrachloroethylene	4000	2600	35	ND	ND	0
1,1,1-trichloroethane	ND	21	>100	ND	ND	0
trichloroethene	ND	38	>100	ND	ND	0
dichloromethane	20	ND	>100	ND	ND	0
Aluminum	2100000	2200000	4	1900000	1800000	5
Barium	12000	13000	7	13000	11000	15
Beryllium	88	95	7	210	190	9
Cadmium	620	750	17	670	630	6
Calcium	83000000	120000000	31	260000000	230000000	11
Chromium	7200	8400	14	6200	5900	5
Cobalt	5100	5800	12	4800	4200	12
Silver	3700	3400	8	2500	3600	31
Copper	10000	11000	9	9100	8400	8
Sodium	140000	150000	7	130000	130000	0
Vanadium	9500	9200	3	8600	7800	9
Zinc	22000	25000	12	18000	16000	11
Antimony	ND	ND	0	ND	ND	0
Arsenic	7100	4000	44	4100	2500	39
Lead	3500	3600	3	4500	3000	33
Selenium	ND	ND	0	ND	ND	0
Thallium	2000	1800	10	1600	1900	16
Mercury	ND	ND	0	ND	ND	0

VOCs detected in Duplicate Soil Samples shown in Parts per Billion (ug/kg),
Metals Targeted in Duplicate Soil Samples shown in Parts per Million (mg/kg).
ND denotes analyte was not detected at the laboratory detection levels.

7.2 - Geotechnical Analysis and Findings

Geotechnical analysis of selected soil samples was completed to evaluate potential remedial technologies. Samples were selected for geotechnical analysis based on them being representative of the subsurface materials encountered, and at a depth where a remedial technology might be applied. The QA/QC program for geotechnical analysis of the soil samples specified laboratory test procedures which followed ASTM procedures or approved equivalent methods for analysis of textural gradation and percent moisture.

The results of the geotechnical analysis are included as Attachment H for the samples collected from the soil borings, and as Attachment K for the samples collected from the groundwater monitoring well borings, both of which are presented in Volume III of this report. Soil samples collected for geotechnical analysis are listed below:

Geotechnical Samples from Soil Borings

Boring	Depth	Analysis Performed
SB-1	14-16 ft	% Moisture
SB-2	14-16 ft	% Moisture
SB-3	19-21 ft	% Moisture
SB-5	14-16 ft	Textural Gradation, % Moisture
SB-6	19-21 ft	Textural Gradation, % Moisture
SB-10	14-16 ft	Textural Gradation, % Moisture

Geotechnical Samples from Monitoring Well Borings

Well	Depth	Analysis Performed
MWA-4	39-41 ft	Textural Gradation
MWA-5	34-36 ft	Textural Gradation
MWB-2	74-76 ft	Textural Gradation
MWC-1	104-106 ft	Textural Gradation
MWC-2	114-116 ft	Textural Gradation
MWC-3	76-78 ft	Textural Gradation

The laboratory results textural gradation and % moisture are presented in the following tables. Textural gradation was found by sieve analysis with the percent fines (or percent passing the sieve) reported. The % moisture test was conducted using ASTM D-2216.

Boring SB-5 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	100
0.75"	100
0.5"	81.8
0.375"	78.7
#4	59.6
#10	40.0
#20	27.9
#40	19.1
#60	13.5
#100	10.7
#140	9.5
#200	8.5

unsat.

The SB-5 soil sample is described as a brown fine gravelly fine to coarse grained sand.

Boring SB-6 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	100
0.75"	92.6
0.5"	87.5
0.375"	81.5
#4	63.0
#10	42.9
#20	28.7
#40	17.1
#60	12.3
#100	9.9
#140	8.9
#200	8.0

water table

The SB-6 soil sample is described as a brown fine gravelly fine to coarse grained sand with a trace of silt.

Boring SB-10 Sieve Size	Textural Gradation Percent Finer
2.5”	----
2”	----
1.5”	----
1”	100
0.75”	88.8
0.5”	70.9
0.375”	62.0
#4	45.7
#10	31.1
#20	22.3
#40	15.9
#60	11.6
#100	9.1
#140	8.1
#200	7.4

The SB-10 soil sample is described as a brown sandy fine gravel with a trace of silt.

Well MWA-4 Sieve Size	Textural Gradation Percent Finer
2.5”	100
2”	100
1.5”	100
1”	100
0.75”	100
0.5”	100
0.375”	100
#4	97.3
#10	93.5
#20	82.0
#40	41.9
#60	13.1
#100	5.6
#140	4.2
#200	3.3

The MWA-4 soil sample is described as dark brown fine to medium sand with a trace of silt & fine gravel.

Well MWA-5 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	100
0.75"	100
0.5"	89.0
0.375"	84.3
#4	75.3
#10	60.6
#20	40.0
#40	21.8
#60	11.5
#100	6.7
#140	5.4
#200	4.6

The MWA-5 soil sample is described as dark brown fine to medium sand with fine gravel & a trace of silt.

Well MWB-2 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	100
0.75"	92.0
0.5"	83.2
0.375"	81.8
#4	74.0
#10	59.0
#20	39.7
#40	24.1
#60	16.4
#100	11.6
#140	9.8
#200	8.5

The MWB-2 soil sample is described as gray gravelly fine to coarse sand with a trace of silt.

Well MWC-1 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	86.6
0.75"	77.3
0.5"	70.6
0.375"	58.9
#4	41.1
#10	24.2
#20	13.7
#40	7.6
#60	4.7
#100	3.5
#140	2.8
#200	2.3

The MWC-1 soil sample is described as gray sandy fine to coarse grained gravel with a trace of silt.

Well MWC-2 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	100
0.75"	100
0.5"	96.5
0.375"	96.5
#4	92.4
#10	83.1
#20	56.1
#40	20.3
#60	8.6
#100	6.1
#140	5.5
#200	5.2

The MWC-2 soil sample is described as gray fine to medium sand with a trace of silt & fine gravel.

Well MWC-3 Sieve Size	Textural Gradation Percent Finer
2.5"	100
2"	100
1.5"	100
1"	100
0.75"	100
0.5"	97.9
0.375"	95.3
#4	89.7
#10	80.6
#20	64.8
#40	41.1
#60	25.1
#100	18.4
#140	15.8
#200	13.5

The MWC-3 soil sample is described as dark brown fine to medium sand with a little silt & fine gravel.

The % moisture content analysis results are presented in the following table. Note that all soil samples were collected above the water table.

Geotechnical Analysis for % Moisture

Boring	Depth	% Moisture
SB-1	14-16 ft	3.7 %
SB-2	14-16 ft	6.2 %
SB-3	19-21 ft	4.3 %
SB-5	14-16 ft	4.9 %
SB-6	19-21 ft	4.7 %
SB-10	14-16 ft	4.5 %

Section 8.0 - Findings and Discussion for Groundwater Samples

Groundwater samples were collected from each of the fifteen groundwater monitoring wells during two sampling events. The wells were sampled twice to determine if there were any effects on water quality due to seasonal water level fluctuations. The first sampling event was completed in December, 1994, and the second was completed in February, 1995. Both groundwater sampling events were performed using EPA approved standard sampling procedures.

Groundwater samples were collected and analyzed for TCL VOCs, and TAL metals. Each well had remained static for approximately two weeks following well development prior to collection of the first round of samples. All wells were screened for evidence of organic vapors prior to collection of the first round of groundwater samples in December 1994 using a PID. The PID was inserted into each open well top immediately upon opening the well. The maximum instantaneous PID measurements were recorded in the field logbook as measured immediately upon opening the well top.

No significantly elevated levels of volatile organic compounds were detected using the PID, and none were measured in excess of levels of concern as described in the health and safety plan. The PID levels in the open wells were immediately reduced to ambient background level as each well vented following opening. The wells were not screened for evidence of volatile organic compounds at the time of the second round of groundwater samples in February 1995 because the ambient air temperature was so low as to render PID measurements unreliable, and the first round PID measurements did not encounter any significantly elevated levels of volatile organic compounds.

Water levels were measured from the top of the PVC casing prior to well purging. An interface probe was used to measure water levels and the thickness of any non-aqueous phase product (LNAPLs or DNAPLs) prior to purging the well in preparation for groundwater sampling. The water levels and notes regarding the possible presence of non-aqueous phase product were recorded for both sampling rounds. No evidence of LNAPLs or DNAPLs was found during either of the two groundwater sampling rounds, or during collection of additional water level measurements in January 1995. The results of the laboratory analysis for VOCs and metals are presented with a discussion of those findings.

The QA/QC program for chemical analysis of the groundwater samples consisted of the collection and analysis of duplicate samples, spiked samples, equipment blanks and trip blanks. The purpose of this program was to ensure the analyses performed by the analytical laboratory are reproducible. The chain of custody documentation, any QA/QC sample analytical results and the laboratory results for the groundwater samples are included as Attachment M (First Round) and Attachment N (Second Round), both of which are presented in Volume III of this report.

The findings of the laboratory analysis of both rounds of the groundwater samples are presented separately for the VOCs and metals. The water level measurements are presented with an interpretation of groundwater flow directions for the three sets of water level measurements collected.

The contaminant distribution patterns as seen in the groundwater samples are discussed for all the findings including both rounds of groundwater samples and all water level measurements. The information presented for the MWA and MWB wells is applicable to the unconfined aquifer.

8.1 - VOCs Analysis and Findings

First Round Groundwater Samples

The laboratory analysis detected several volatile organic compounds in the first round groundwater samples. The samples containing these detected compounds are listed in the following tables.

VOCs in First Round Groundwater Samples

VOCs	MWA-1	MWA-2	MWA-3	MWA-4	MWA-5	MWA-6
tetrachloroethylene	2500	2400	2200	15	240	1.9
trichloroethene	350	110	240	76000	1100	2600
benzene	ND	ND	ND	ND	ND	ND
1,2-dichloroethene (total)	110	8.3	160	30000	61	74
cis-1,2 dichloroethylene	110	8.3	160	30000	59	73
trans-1,2 dichloroethylene	ND	ND	4.3	110	2.1	1.3
1,1,1-trichloroethane	3300	8600	5500	28	2600	640
1,1,2-trichloroethane	ND	ND	ND	ND	2.1	ND
chloroform	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	65	3.6	590	ND	74	ND
1,2 -dichloroethane	ND	ND	5	ND	5	ND
1,1-dichloroethene	81	84	240	42	260	19
trichlorofluoromethane	ND	ND	ND	ND	2.1	ND
dichlorodifluoromethane	470	94	79	ND	1.5	ND
vinyl chloride	ND	ND	1.7	1100	ND	ND
chloroethane	ND	ND	1.3	ND	ND	ND

VOCs in Round #1 Groundwater Samples. All Results in Parts per Billion (ug/l).
ND denotes analyte was not detected at the laboratory detection levels.

VOCs in First Round Groundwater Samples

VOCs	MWB-1	MWB-2	MWB-3	MWB-4	MWB-5	MWB-6
tetrachloroethylene	ND	1.6	ND	ND	ND	1.8
trichloroethene	ND	ND	9900	8.7	1	2400
benzene	ND	ND	2.4	ND	ND	ND
1,2-dichloroethene (total)	ND	ND	1700	ND	ND	310
cis-1,2 dichloroethylene	ND	ND	1700	ND	ND	290
trans-1,2 dichloroethylene	ND	ND	24	ND	ND	17
1,1,1-trichloroethane	ND	ND	320	ND	ND	81
1,1,2-trichloroethane	ND	ND	2.5	ND	ND	ND
chloroform	ND	ND	1.9	ND	ND	ND
1,1-dichloroethane	ND	ND	14	ND	ND	85
1,2 -dichloroethane	ND	ND	11	ND	ND	ND
1,1-dichloroethene	ND	ND	27	ND	ND	32
trichlorofluoromethane	ND	ND	3.8	ND	ND	ND
dichlorodifluoromethane	ND	ND	ND	ND	ND	34
vinyl chloride	ND	ND	21	ND	ND	46
chloroethane	ND	ND	ND	ND	ND	ND

VOCs in Round #1 Groundwater Samples. All Results in Parts per Billion (ug/l).
ND denotes analyte was not detected at the laboratory detection levels.

No volatile organic compounds were detected in the first round of groundwater samples collected from MWC-1, MWC-2, or MWC-3.

Second Round Groundwater Samples

The laboratory analysis detected several volatile organic compounds in the second round groundwater samples. The samples containing these detected compounds are listed in the following tables.

VOCs in Second Round Groundwater Samples

VOCs	MWA-1	MWA-2	MWA-3	MWA-4	MWA-5	MWA-6
tetrachloroethylene	2200	1500	1200	11	140	7.3
trichloroethene	180	250	130	37000	1500	1400
1,2-dichlorobenzene	ND	1.8	ND	ND	ND	ND
1,1-dichloropropene	ND	ND	2.2	ND	ND	ND
1,2-dichloroethene (total)	110	8.9	140	16000	190	110
cis-1,2 dichloroethylene	110	8.5	120	16000	190	110
trans-1,2 dichloroethylene	1.3	3.6	17	75	3.3	3.1
1,1,1-trichloroethane	2000	3800	2300	48	3600	420
1,1,2-trichloroethane	ND	ND	ND	1.8	2.6	ND
1,1,1,2-tetrachloroethane	ND	ND	ND	ND	1.4	ND
chloroform	ND	5	2.2	1.2	2	ND
1,1-dichloroethane	69	3.6	710	12	93	4.3
1,2 -dichloroethane	ND	ND	9.4	ND	7.5	ND
1,1-dichloroethene	100	270	100	37	390	34
dichlorodifluoromethane	70	42	17	ND	ND	ND
vinyl chloride	ND	77	53	1400	ND	ND
chloromethane	ND	ND	2.6	ND	ND	ND
chloroethane	ND	ND	2.6	ND	ND	ND

VOCs in Round #2 Groundwater Samples. All Results in Parts per Billion (ug/l).
ND denotes analyte was not detected at the laboratory detection levels.

VOCs in Second Round Groundwater Samples

VOCs	MWB-1	MWB-2	MWB-3	MWB-4	MWB-5	MWB-6
tetrachloroethylene	ND	ND	ND	5.6	ND	1.2
trichloroethene	ND	ND	1100	6.8	ND	760
benzene	ND	ND	2.1	ND	ND	ND
1,2-dichloroethene (total)	ND	ND	3500	1.7	ND	230
cis-1,2 dichloroethylene	ND	ND	3500	1.7	ND	210
trans-1,2 dichloroethylene	ND	ND	28	ND	ND	14
1,1,1-trichloroethane	ND	ND	350	1.3	ND	84
1,1,2-trichloroethane	ND	ND	3.9	ND	ND	ND
chloroform	ND	ND	4.8	ND	ND	ND
1,1-dichloroethane	ND	ND	28	ND	ND	130
1,2 -dichloroethane	ND	ND	42	ND	ND	1
1,1-dichloroethene	ND	ND	28	ND	ND	27
trichlorofluoromethane	ND	ND	ND	ND	ND	ND
dichlorodifluoromethane	ND	ND	ND	ND	ND	4.2
vinyl chloride	ND	ND	26	ND	ND	130
chloromethane	ND	ND	ND	ND	ND	14

VOCs in Round #2 Groundwater Samples. All Results in Parts per Billion (ug/l).
ND denotes analyte was not detected at the laboratory detection levels.

No volatile organic compounds were detected in the second round of groundwater samples collected from MWC-1, MWC-2, or MWC-3.

Findings

Three isoconcentration contour maps were generated which show the interpreted distribution of volatile organic compounds in groundwater within the unconfined aquifer. Maps were prepared showing: total VOCs (sum of the detected compounds in each well), tetrachloroethylene, and trichloroethene. These maps are included as Drawings 16, 17, and 18 for the first round results, and as Drawings 19, 20, and 21 for the second round results. All Drawings are presented in Volume II of this report.

No VOCs were detected in any of the three deeper wells during analysis of the first round or the second round groundwater samples. Recognizable areas of the site having a particular pattern of VOC contamination in the vadose zone (Area A, B, C) were presented as a working model. This model continues to be useful in the discussion of contamination patterns, and identification of potential contamination sources. Refer to Figure 3 (see Volume II of this report) for a map of the facility showing these areas.

<u>Total VOCs - Drawing 16 (First Round) and Drawing 19 (Second Round)</u>

The isoconcentration map for total VOCs was contoured using 50 ppb, 100 ppb, 500 ppb, 1,000 ppb, 5,000 ppb, 10,000 ppb, 50,000 ppb, and 100,000 ppb contours. The two isoconcentration maps show only minor variations in the contaminant distribution patterns between the two sampling rounds. The isoconcentration map shows elevated levels of total VOCs were detected in the groundwater within the unconfined aquifer in the following areas:

- <u>Area A</u>: within the northern portion of Buildings 40A and 40B; in the paved area immediately north and east of those buildings; in the southern portion of Building 50, and in the area of the former TCA tank south of Building 53;
- <u>Area B</u>: to the north of Building 59; in the area near Building 47 extending northward and toward the west; and in the area north of the boiler house;
- <u>Area C</u>: along the southern portion of the site adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40A and 40B.

<u>Tetrachloroethylene - Drawing 17 (First Round) and Drawing 20 (Second Round)</u>

The isoconcentration map for tetrachloroethylene was contoured using 50 ppb, 100 ppb, 500 ppb, and 1,000 ppb contours. The two isoconcentration maps show only minor variations in the contaminant distribution patterns between the two sampling rounds. The isoconcentration map shows elevated levels of tetrachloroethylene were detected in the groundwater within the unconfined aquifer in the following areas:

- <u>Area A</u>: within the northern portion of Buildings 40A and 40B; in the paved area immediately north of those buildings; in the southern portion of Building 50, and in the area of the former TCA tank south of Building 53;

- Area B: to the north of Building 59; in the area near Building 47 extending toward the west; and in the area north and west of the boiler house.

Trichloroethene - Drawing 18 (First Round) and Drawing 21 (Second Round)
The isoconcentration map for trichloroethene was contoured using 50 ppb, 100 ppb, 500 ppb, 1,000 ppb, 5,000 ppb, 10,000 ppb and 50,000 ppb contours. The two isoconcentration maps show only minor variations in the contaminant distribution patterns between the two sampling rounds. The isoconcentration map shows elevated levels of trichloroethene were detected in the groundwater within the unconfined aquifer in the following areas:

- Area A: within the northern portion of Buildings 40A and 40B and in the paved area immediately north of those buildings; this contaminant was found in the area of the former TCA tank south of Building 53 but at reduced levels;
- Area B: in the area to the north of Building 59 and west of Building 47 with contamination noted across a broad area of the site but to a lesser degree than seen in Area A or Area C;
- Area C: significantly elevated levels of this contaminant were noted along the southern portion of the site adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40A and 40B.

8.2 - Metals Analysis and Findings

First Round Groundwater Samples
Dissolved metals analysis was performed using field filtered groundwater samples. Eighteen metals were targeted in TAL metals analysis of the groundwater samples. The laboratory analysis detected the following metals in the groundwater samples. The first round groundwater samples containing these detected metals are listed in the following tables.

Metals in First Round Groundwater Samples

Metals	MWA-1	MWA-2	MWA-3	MWA-4	MWA-5	MWA-6
Barium (ug/l)	210	160	250	320	290	150
Calcium (mg/l)	130	100	150	150	140	140
Cobalt (ug/l)	ND	ND	ND	ND	ND	61
Silver (ug/l)	45	34	38	ND	50	ND
Sodium (mg/l)	73	72	96	85	100	81
Vanadium (ug/l)	ND	ND	ND	29	ND	ND
Antimony (ug/l)	6.6	5	4.5	ND	4.9	4.3
Thallium (ug/l)	13	15	21	17	11	8.4

Dissolved Metals in Round #1 Groundwater Samples.
All Results Units as Indicated.
ND denotes analyte was not detected at the laboratory detection levels.

Metals in First Round Groundwater Samples

Metals	MWB-1	MWB-2	MWB-3	MWB-4	MWB-5	MWB-6
Barium (ug/l)	110	190	110	180	150	180
Calcium (mg/l)	150	160	170	100	150	140
Chromium (ug/l)	ND	ND	ND	ND	23	ND
Cobalt (ug/l)	ND	ND	ND	43	ND	ND
Silver (ug/l)	ND	ND	ND	33	36	45
Sodium (mg/l)	56	180	120	78	150	53
Vanadium (ug/l)	ND	36	42	30	41	ND
Zinc (ug/l)	ND	20	ND	ND	ND	ND
Antimony (ug/l)	ND	5.2	5.1	3	4.7	5.9
Arsenic (ug/l)	2.4	ND	ND	ND	ND	ND
Lead (ug/l)	ND	1.1	1.4	ND	1.1	ND
Thallium (ug/l)	13	42	23	15	26	4.7
Mercury (ug/l)	0.28	ND	ND	ND	ND	ND

Dissolved Metals in Round #1 Groundwater Samples.
All Results Units as Indicated.
ND denotes analyte was not detected at the laboratory detection levels.

Metals in First Round Groundwater Samples

Metals	MWC-1	MWC-2	MWC-3
Barium (ug/l)	210	220	130
Calcium (mg/l)	100	97	130
Chromium (ug/l)	23	23	ND
Silver (ug/l)	47	44	ND
Sodium (mg/l)	21	32	57
Vanadium (ug/l)	ND	75	31
Antimony (ug/l)	ND	5.7	5.9
Arsenic (ug/l)	7.5	6.9	ND
Lead (ug/l)	ND	ND	1
Thallium (ug/l)	4.8	5.7	11
Mercury (ug/l)	ND	0.58	ND

Dissolved Metals in Round #1 Groundwater Samples.
All Results Units as Indicated.
ND denotes analyte was not detected at the laboratory detection levels.

The concentrations of the detected metal species were similar when comparing the groundwater samples collected from the unconfined and the semi-confined aquifers. Naturally occurring calcium concentrations were examined by Walton and Scudder, 1960 in glacial aquifers like those found at the subject site. The calcium concentrations reported by Walton and Scudder were in the range of 104 to 144 ppm. The calcium concentrations in the first round groundwater samples were comparable to the published values.

Second Round Groundwater Samples

Dissolved metals analysis was performed using field filtered groundwater samples. Eighteen metals were targeted in TAL metals analysis of the groundwater samples. The laboratory analysis detected the following metals in the groundwater samples. The results were reported by the laboratory in units of mg/l (parts per million), but were converted to the units as reported in the first round results for ease of comparison between the two sample rounds. The second round groundwater samples containing these detected metals are listed in the following tables.

Metals in Second Round Groundwater Samples

Metals	MWA-1	MWA-2	MWA-3	MWA-4	MWA-5	MWA-6
Barium (ug/l)	200	200	240	220	320	200
Calcium (mg/l)	110	110	140	130	120	140
Sodium (mg/l)	59	63	80	83	120	68
Vanadium ug/l)	ND	ND	20	ND	ND	ND
Thallium (ug/l)	11	9	14	12	21	14
Mercury (ug/l)	ND	ND	ND	0.22	ND	ND

Dissolved Metals in Round #2 Groundwater Samples.
All Results Units as Indicated.
ND denotes analyte was not detected at the laboratory detection levels.

Metals in Second Round Groundwater Samples

Metals	MWB-1	MWB-2	MWB-3	MWB-4	MWB-5	MWB-6
Aluminum (ug/l)	ND	150	ND	ND	180	ND
Barium (ug/l)	100	160	110	180	140	160
Calcium (mg/l)	110	130	150	96	140	130
Cobalt (ug/l)	34	32	ND	ND	29	20
Silver (ug/l)	ND	37	ND	ND	36	ND
Sodium (mg/l)	40	140	100	59	130	80
Antimony (ug/l)	4.4	ND	ND	ND	ND	ND
Arsenic (ug/l)	2.6	ND	ND	ND	ND	ND
Thallium (ug/l)	11	29	15	13	25	10

Dissolved Metals in Round #2 Groundwater Samples.
All Results Units as Indicated.
ND denotes analyte was not detected at the laboratory detection levels.

Metals in Second Round Groundwater Samples

Metals	MWC-1	MWC-2	MWC-3
Aluminum (ug/l)	140	ND	ND
Barium (ug/l)	210	250	140
Calcium (mg/l)	44	84	120
Cobalt (ug/l)	33	30	ND
Silver (ug/l)	46	40	ND
Sodium (mg/l)	7.9	20	43
Antimony (ug/l)	5.6	4.3	ND
Arsenic (ug/l)	10	6.3	ND
Thallium (ug/l)	4.5	5.4	7

Dissolved Metals in Round #2 Groundwater Samples.
All Results Units as Indicated.
ND denotes analyte was not detected at the laboratory detection levels.

As had been seen in the laboratory results from the first round groundwater samples, the concentrations of the detected metal species were similar in the second round groundwater samples when comparing the groundwater samples collected from the unconfined and the semi-confined aquifers.

QA/QC for First Round Groundwater Samples

The QA/QC program for chemical analysis of the groundwater samples consisted of the collection and analysis of duplicate samples, spiked samples, and equipment and trip blanks. Duplicate samples were collected and analyzed for metals and VOCs as was done for all the groundwater samples. Sample 94-2-MWC3-12 is a duplicate sample of 94-1-MWC3-12 for VOC analysis. Sample 94-2-MWA5-12 is a duplicate of 94-1-MWA5-12 for metals analysis. Samples were spiked in the laboratory, analyzed and the results were retained at the laboratory in their records retention system.

One equipment blank was collected by pouring deionized water over the decontaminated sampling equipment and collecting the rinsate for laboratory analysis. The rinsate water sample was identified as 94-3-RINS-12. No VOCs were detected in the equipment blank indicating no cross contamination of the samples took place associated with equipment decontamination procedures. One trip blank, identified as 94-4-TB-12, accompanied the samples during transit from the site to the laboratory. No VOCs were detected in the trip blank sample indicating cross-contamination did not take place during sample handling.

The detected VOCs and targeted metals in the duplicate sample pairs are presented in the following table. Overall reproducibility of the laboratory results between the duplicate samples showed that sample handling does not appear to have introduced any significant variability in the results.

Duplicate First Round Groundwater Sample Pairs

Duplicate Samples	94-1-MWC3-12 (Sample)	94-2-MWC3-12 (Duplicate)	% Difference	94-1-MWA5-12 (Sample)	94-2-MWA5-12 (Duplicate)	% Difference
All Targeted VOCs Not Detected	ND	ND	0	---	---	---
Aluminum	---	---	---	ND	ND	0
Barium	---	---	---	290	310	6
Beryllium	---	---	---	ND	ND	0
Cadmium	---	---	---	ND	ND	0
Calcium	---	---	---	140000	140000	0
Chromium	---	---	---	ND	ND	0
Cobalt	---	---	---	ND	ND	0
Silver	---	---	---	50	34	32
Copper	---	---	---	ND	ND	0
Sodium	---	---	---	100000	110000	9
Vanadium	---	---	---	ND	49	>100
Zinc	---	---	---	ND	ND	0
Antimony	---	---	---	4.9	3.3	33

Duplicate Samples	94-1-MWC3-12 (Sample)	94-2-MWC3-12 (Duplicate)	% Difference	94-1-MWA5-12 (Sample)	94-2-MWA5-12 (Duplicate)	% Difference
Arsenic	---	---	---	ND	ND	0
Lead	---	---	---	ND	ND	0
Selenium	---	---	---	ND	ND	0
Thallium	---	---	---	11	13	15
Mercury	---	---	---	ND	ND	0

VOCs and Metals in Round #1 Duplicate Groundwater Samples,
Results shown in Parts per Billion (ug/l).
ND denotes analyte was not detected at the laboratory detection levels.

QA/QC for Second Round Groundwater Samples

The QA/QC program for chemical analysis of the groundwater samples consisted of the collection and analysis of duplicate samples, spiked samples, and equipment and trip blanks. Duplicate samples were collected and analyzed for metals and VOCs as was done for all the groundwater samples. Sample 95-2-MWB3-2 is a duplicate sample of 95-1-MWB3-2 for VOC analysis. Sample 95-2-MWB2-2 is a duplicate of 95-1-MWB2-2 for metals analysis. Samples were spiked in the laboratory, analyzed and the results were retained at the laboratory in their records retention system.

One equipment blank was collected by pouring deionized water over the decontaminated sampling equipment and collecting the rinsate for laboratory analysis. The rinsate water sample was identified as 95-4-EB-2. One VOC compound was detected in the equipment blank. Trichloroethene was detected at 1.2 ug/l (parts per billion). The low level of this compound as detected indicates significant cross-contamination of the samples did not take place due to equipment decontamination procedures.

One trip blank, identified as 95-4-TB-2, accompanied the samples during transit from the site to the laboratory. No VOCs were detected in the trip blank sample indicating cross-contamination did not take place during sample handling.

Overall reproducibility of the laboratory results between the duplicate samples showed that sample handling does not appear to have introduced any significant variability in the results. The detected VOCs and targeted metals in the duplicate sample pairs are presented in the following table.

Duplicate Second Round Groundwater Sample Pairs

Duplicate Samples	95-1-MWB3-2 (Sample)	95-2-MWB3-2 (Duplicate)	% Difference	95-1-MWB2-2 (Sample)	95-2-MWB2-2 (Duplicate)	% Difference
benzene	2.1	2.4	12	---	---	---
chloroform	4.8	8.1	41	---	---	---
1,1-dichloroethane	28	49	43	---	---	---
1,2-dichloroethane	42	39	7	---	---	---
1,1-dichloroethene	28	61	54	---	---	---
cis-1,2 dichloroethylene	3500	1500	57	---	---	---
trans-1,2 dichloroethylene	28	48	42	---	---	---
1,2-dichloroethene (total)	3500	1500	57	---	---	---
1,1,1-trichloroethane	350	230	34	---	---	---
1,1,2-trichloroethane	3.9	5.1	24	---	---	---
trichloroethene	1100	5700	81	---	---	---
trichlorotrifluoromethane	ND	2.9	>100	---	---	---
vinyl chloride	26	110	76	---	---	---
Aluminum	---	---	---	150	210	29
Barium	---	---	---	160	160	0
Beryllium	---	---	---	ND	ND	0
Cadmium	---	---	---	ND	ND	0
Calcium	---	---	---	130000	140000	7
Chromium	---	---	---	ND	ND	0
Cobalt	---	---	---	32	29	9
Silver	---	---	---	37	36	3
Copper	---	---	---	ND	ND	0
Sodium	---	---	---	140000	150000	7
Vanadium	---	---	---	ND	ND	0
Zinc	---	---	---	ND	ND	0
Antimony	---	---	---	ND	ND	0
Arsenic	---	---	---	ND	ND	0
Lead	---	---	---	ND	ND	0
Selenium	---	---	---	ND	ND	0
Thallium	---	---	---	29	27	7
Mercury	---	---	---	ND	ND	0

VOCs and Metals in Round #2 Duplicate Groundwater Samples,
Results shown in Parts per Billion (ug/l).
ND denotes analyte was not detected at the laboratory detection levels.

8.3 - Water Levels and Groundwater Flow

Water level measurements were collected at each groundwater monitoring well on a monthly basis for a period of three months after completion of the wells. Measurements were obtained prior to the beginning of purging and groundwater sample collection at the time of the first groundwater sampling event on December 13-14, 1994, on January 24, 1995, and at the time of the second groundwater sampling event on February 20, 1995.

Three rounds of water level measurements were collected to observe temporal variations in groundwater levels during the reporting period. The depth to water in each monitoring well was measured and referenced to a standard elevation above mean sea level, thereby allowing computation of the reference elevation for the water level in each well.

First Round Water Level Measurements

Water level measurements collected at the time of the first round groundwater sampling event on December 13-14, 1994 as presented in the following table. No LNAPLs or DNAPLs were detected in any well during the water level measurements.

First Round Water Level Measurements

Well	Depth to Water (Feet)	Well Top Elevation (Feet Above Mean Sea Level)	Water Elevation (Feet Above Mean Sea Level)
MWA-1	27.25	751.43	724.18
MWA-2	25.07	749.45	724.38
MWA-3	27.79	752.19	724.40
MWA-4	26.63	751.27	724.64
MWA-5	26.99	751.25	724.26
MWA-6	27.40	751.75	724.35
MWB-1	20.68	744.93	724.25
MWB-2	27.69	751.62	723.93
MWB-3	27.59	752.13	724.54
MWB-4	28.01	751.64	723.63
MWB-5	26.04	750.73	724.69

Well	Depth to Water (Feet)	Well Top Elevation (Feet Above Mean Sea Level)	Water Elevation (Feet Above Mean Sea Level)
MWB-6	26.87	751.37	724.50
MWC-1	25.53	745.00	719.47
MWC-2	31.47	751.60	720.13
MWC-3	27.66	752.15	724.49

The interpreted direction of groundwater flow was computed for the unconfined aquifer and is shown in Drawing 22. Wells MWA and MWB are completed in the unconfined aquifer. The water elevations were contoured to show lines of equal groundwater elevation above mean sea level. The map shows a generally non-uniform groundwater elevation change, producing a variable gradient, across the site from the southwest toward the northeast. The gradient near the southwestern portion of the site was approximately 0.0003 foot/foot. As can be seen on the map, the gradient becomes steeper in the northeastern portion of the site. There the gradient was approximately 0.001 foot/foot. The interpreted direction of groundwater flow in the unconfined aquifer across the subject site was toward the northeast.

Water level measurements at the MWC-3 well (completed in the semi-confined aquifer below a till layer encountered at approximately 57 feet) and the MWB-3 well installed immediately adjacent to it (completed in the lower portion of the unconfined aquifer) showed only 0.05 foot difference in water elevation. The water levels in the other two semi-confined aquifer wells, MWC-1 and MWC-2, were approximately 4 to 5 feet lower than the water elevation in the unconfined aquifer wells.

Second Round Water Level Measurements

Water level measurements collected January 24, 1995 are presented in the following table. No LNAPLs or DNAPLs were detected in any well during the water level measurements.

Second Round Water Level Measurements

Well	Depth to Water (Feet)	Well Top Elevation (Feet Above Mean Sea Level)	Water Elevation (Feet Above Mean Sea Level)
MWA-1	28.21	751.43	723.22
MWA-2	26.01	749.45	723.44
MWA-3	28.72	752.19	723.47
MWA-4	27.52	751.27	723.75
MWA-5	27.92	751.25	723.33
MWA-6	28.23	751.75	723.52
MWB-1	21.74	744.93	723.19
MWB-2	28.60	751.62	723.02
MWB-3	28.41	752.13	723.72
MWB-4	28.95	751.64	722.69
MWB-5	26.93	750.73	723.80
MWB-6	27.81	751.37	723.56
MWC-1	25.81	745.00	719.19
MWC-2	31.57	751.60	720.03
MWC-3	28.48	752.15	723.67

The interpreted direction of groundwater flow was computed for the unconfined aquifer and is shown in Drawing 23. All water elevations fell approximately 0.5 to 1.0 foot in the unconfined aquifer from the December 1994 levels. The map shows a generally non-uniform groundwater elevation change, producing a variable gradient, across the site from the southwest toward the northeast. The gradient near the southwestern portion of the site was approximately 0.0003 foot/foot. The gradient became steeper in the northeastern portion of the site where it was approximately 0.001 foot/foot. The interpreted direction of groundwater flow in the unconfined aquifer across the subject site remained toward the northeast.

The water level measurements at the MWC-3 well and the MWB-3 well installed immediately adjacent to it again showed only 0.05 foot difference in water elevation. The water levels in the other two semi-confined aquifer wells, MWC-1 and MWC-2, were approximately 3.5 to 4.5 feet lower than the water elevation of the unconfined aquifer wells, and had fallen approximately 0.1 to 0.5 foot from their December 1994 levels.

Third Round Water Level Measurements

Water level measurements collected at the time of the second round of groundwater sampling on February 20, 1995 as presented in the following table. No LNAPLs or DNAPLs were detected in any well during collection of the water level measurements.

Third Round Water Level Measurements

Well	Depth to Water (Feet)	Well Top Elevation (Feet Above Mean Sea Level)	Water Elevation (Feet Above Mean Sea Level)
MWA-1	28.54	751.43	722.89
MWA-2	26.29	749.45	723.16
MWA-3	29.01	752.19	723.18
MWA-4	27.72	751.27	723.55
MWA-5	28.18	751.25	723.07
MWA-6	28.50	751.75	723.25
MWB-1	22.11	744.93	722.82
MWB-2	28.93	751.62	722.69
MWB-3	28.64	752.13	723.49
MWB-4	29.28	751.64	722.36
MWB-5	27.20	750.73	723.53
MWB-6	28.06	751.37	723.31
MWC-1	26.18	745.00	718.82
MWC-2	31.97	751.60	719.63
MWC-3	28.73	752.15	723.42

The interpreted direction of groundwater flow was computed for the unconfined aquifer and is shown in Drawing 24. All water elevations fell approximately 0.25 to 0.5 foot in the unconfined aquifer from the January 1995 levels. The map shows a generally non-uniform groundwater elevation change, producing a variable gradient, across the site from the southwest toward the northeast. The gradient near the southwestern portion of the site was approximately 0.0003 foot/foot. The gradient became steeper in the northeastern portion of the site where it was approximately 0.001 foot/foot. The interpreted direction of groundwater flow in the unconfined aquifer across the subject site remained toward the northeast.

The water level measurements at the MWC-3 well and the MWB-3 well showed only 0.07 foot difference in water elevation. The water levels in the other two semi-confined aquifer wells, MWC-1 and MWC-2, were approximately 3.75 to 4.5 feet lower than the water elevation of the unconfined aquifer wells, and had fallen approximately 0.3 to 0.4 foot from their January 1995 levels. The water elevation in the MWC-3 well fell 0.23 foot from the January 1995 level, much like what had occurred at the unconfined aquifer wells.

The technique of generating a graphical solution for establishing groundwater flow direction requires a minimum of three measurement points distributed across the area of interest in order to generate a credible flow direction. Three wells were installed in the semi-confined aquifer, however, the water elevation in the MWC-3 well suggests that well appears more similar to the unconfined aquifer wells, that is, the MWC-3 well appears to be hydraulically connected to the unconfined aquifer. With only two wells yielding water elevations which might be reliably associated with the semi-confined aquifer, its flow direction and gradient cannot be well understood at this time.

8.4 - Discussion of Findings

The groundwater sample results, groundwater flow patterns, and interpreted distribution of contaminants revealed the following patterns of contamination in the unconfined aquifer across the property:

- The levels of tetrachloroethylene in the unconfined aquifer appear to be greatest in the central portion of the facility within Area A and Area B. The distribution of the tetrachloroethylene controls the total VOCs distribution pattern in that portion of the site, indicating tetrachloroethylene is the principal contaminant in that portion of the site.

- The areas affected by tetrachloroethylene contamination are the northern portion of Buildings 40A and 40B and the paved area immediately north and east of those buildings; the southern portion of Building 50, the area of the former TCA tank south of Building 53; the area to the north of Building 59; the area near Building 47 extending northward and toward the west; and the area north and west of the boiler house;

- The concentrations of trichloroethene in the unconfined aquifer appear to be greatest along the southern portion of the site within Area C. The distribution of the trichloroethene controls the total VOCs distribution pattern in that portion of the site, indicating trichloroethene is the principal contaminant in that portion of the site.

- The areas affected by trichloroethene contamination are adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40A and 40B. Area A and Area B are affected by this contaminant but to a much lesser degree.

These findings agree well with the work completed during previous investigations at the facility, the soil vapor survey and the soil sample analysis completed as a part of this investigation. The areas near Buildings 40A and 40B, the area to the south of Building 53 near the former TCA tanks, the area east of Building 50, and the western and southern portions of the former Maxwell Complex are areas where elevated levels of VOC contamination have been documented in soil and groundwater.

The patterns of contamination by the principal mapped contaminants in the soil and groundwater, tetrachloroethylene and trichloroethene, reveal a contaminant transport relationship between the soil and groundwater. These two compounds account for the overall pattern of VOC contamination observed in the soil and groundwater.

Groundwater contamination plumes appear to originate from locations within the plant, or as plumes entering the site from off-site sources in areas where soil contamination is also present, particularly in the deeper portion of the vadose soil zone. Soil and groundwater contamination by tetrachloroethylene is greatest in Areas A and B. Soil and groundwater contamination by trichloroethene occurs mainly in Area C.

Additional relationships were observed. Several organic compounds having greater concentration levels were detected in the unconfined aquifer in the MWA wells than the MWB wells, that is, contamination is greater in the shallow portion of the unconfined aquifer than the deeper portions of the same aquifer. This pattern suggests groundwater in contact with the base of the unsaturated soil zone is in contact with a contamination source, possibly only during certain periods of time in response to seasonal water level fluctuations.

Contaminants may enter groundwater as they become dissolved into the water from contaminant sources in the unsaturated soil zone. Seasonal water level fluctuations, as observed during this investigation, appear to remove groundwater from contacting contaminated soil. As the water levels fell during the three month period of this investigation, the overall level of groundwater contamination by VOCs decreased. This contaminant migration model is supported by the pattern of greater contamination having been documented in the deep vadose soil and greater groundwater contamination having been documented in the wells completed in the upper portion of the unconfined aquifer.

The three groundwater elevation maps show the groundwater flow direction remained constant during the investigation. The groundwater flow gradient appeared to vary across the site for each set of water level measurements, but the amount of variance in the gradient appeared to remain constant between measurement sets. The groundwater contamination plumes as shown on the isoconcentration maps conform well to the interpreted groundwater flow direction. The contaminant plumes in Areas A and B appear to originate from locations within the plant. The plume shown in Area C appears to originate either from the portion of the site directly adjacent to Leo Street, or from some off-site source.

The findings for both groundwater sampling rounds show the semi-confined aquifer does not appear to be affected by VOC contamination at this time. No VOCs were detected in any well completed in the semi-confined aquifer in either groundwater sampling round.

The metals concentrations were similar in both the unconfined and semi-confined aquifers. This suggests that since the absence of VOCs in the semi-confined aquifer can be interpreted as an indication of no impact to that aquifer. The similarity of the metals concentrations in the aquifers can be interpreted as evidence of no significant impact to groundwater in either aquifer by the targeted metals at this time.

Section 9.0 - Interpretations of Contaminant Distribution Patterns

Contaminant distribution patterns were established using information generated from several investigative methods. A review of previous limited investigations and existing information sources was conducted. This was followed by a soil vapor survey which established contamination patterns in portions of the site designated as Areas A, B, and C. Soil samples were collected from soil borings and during the installation of the groundwater monitoring wells for TCL VOCs and TAL metals. Two rounds of groundwater samples were collected and analyzed for TCL VOCs and TAL metals. Groundwater flow directions and water level fluctuations were examined for the unconfined aquifer using three sets of water level measurements. This information was compiled as an integrated package and contaminant distribution patterns were developed for soil and groundwater. The affected areas as documented through the different investigative techniques have been related to the reference Areas A, B, and C.

Previous investigations indicated soils and groundwater had been impacted by volatile organic compounds with limited heavy metal contamination documented in the area of the former Maxwell Complex. Aerial photographs showed areas of possible concern within the northern areas of the plant prior to its development, unpaved areas within the plant boundaries which formerly existed near the manufacturing buildings, and an area where easy access to the undeveloped northern portion of the site was possible prior to its development. Additionally, several areas were identified where material storage took place within the plant boundaries over many years, particularly in the area adjacent to Leo Street in the extreme southern area.

Sanborn maps showed areas of possible concern associated with historical manufacturing processes and materials handling areas within the plant boundaries in association with the former Maxwell Complex. Off-site areas of concern were focused along the southern portion of the site including the former paint and varnish facility across Leo Street, the former service stations located across Leo Street and at the intersection of Leo and

Webster Streets, and the group of light industries located approximately 300 to 400 feet south of the DTPP property.

A review of potential contamination sources conducted by Clean Tech revealed several potential on-site sources of contaminants which may have impacted the soil or groundwater. These potential sources include: underground and above ground storage tanks, chemical handling or storage areas, hazardous waste generation and accumulation storage areas, sumps for waste oil or process wastewater, past spills, and various processes or operations of the plant.

Significant potential on-site sources of contamination include tanks which stored TCA and TCA sludge which were located on the south side of Building 53 and the north side of Building 40; a TCE degreaser station formerly located near the southern end of Building 53; a TCA degreaser formerly located in the northeast area of Building 40A; and a CFC-113 degreaser formerly located in the middle of Building 40A. Spill records revealed potential contamination from spills of approximately 500 gallons of chrome-containing paint sludge in Building 47; an overfill of TCA storage tank (quantity unspecified); a release of approximately 35 gallons of untreated wastewater containing flux rinse water near Building 50; and a release of an unspecified quantity of TCA from a tank next to Building 53.

The soil vapor survey revealed contamination in the vadose zone across the property. VOC contamination in the vadose zone appeared to be greatest in Area A in both the shallow and deep portions of the vadose zone. VOC contamination in the vadose zone was noted at a lesser magnitude across Area B in both the shallow and deep portions of the vadose zone, but was much more pronounced in the deep vadose zone. Isolated areas of significantly elevated VOCs were noted in Area C for both the shallow and deep portions of the vadose zone, but were much more pronounced in the deep vadose zone.

Soil sample analysis confirmed these patterns of soil contamination across the property. Tetrachloroethylene in the soil was greatest in the central portion of the facility within Area A and Area B. The distribution of the tetrachloroethylene controls the total VOCs distribution pattern in these areas. Trichloroethene in the soil was greatest along the southern portion of the site within Area C. The distribution of the trichloroethene controls the total VOCs distribution pattern in the southern area.

Groundwater sample analysis and groundwater flow patterns established a contamination pattern which relates vadose soil and groundwater contaminants in the unconfined aquifer across the property. No detectable levels of VOCs were found in the semi-confined aquifer for first round or second round groundwater samples. No LNAPLs or DNAPLs were detected in any well for any of the three sets of water level measurements.

The levels of tetrachloroethylene in the unconfined aquifer were greatest in the central portion of the facility within Area A and Area B in the same area and pattern similar to that seen for the soil contamination. The distribution of the tetrachloroethylene controls the total VOCs distribution pattern in those areas. The levels of trichloroethene in the unconfined aquifer were greatest along the southern portion of the site within Area C in the same area and pattern similar to that seen for the soil contamination. The distribution of the trichloroethene controls the total VOCs distribution pattern in that portion of the site, indicating trichloroethene is the principal contaminant in Area C.

The information gathered through each investigative technique may be summarized as follows for each contamination area:

<u>Area A</u>

- Previous Investigations

  Soil contaminants at Building 40B in the area of former CFC-113 degreaser station, and soil and groundwater contaminants on south side of Building 53 in the area of the former TCA storage tanks, and at Buildings 40A and 40B which contained former TCA degreasers.

- Soil Vapor Survey

  Areas with elevated VOCs in the area to the north of Buildings 40A and 40B, and to the south of Buildings 50 and 53 in the area of the former TCA storage tanks with VOCs elevated in both shallow and deep vadose soil zones with greater contamination in the deep vadose zone.

- Soil Samples

  Affected areas are northern portions of Buildings 40A and 40B and the paved area immediately north and east of those buildings, and the southern portion of Building 50 in the area of the former TCA tank south of Building 53.

- Groundwater

  Areas affected by contamination are the northern portion of Buildings 40A and 40B and the paved area immediately north and east of those buildings, and the southern portion of Building 50 in the area of the former TCA tank south of Building 53.

<u>Area B</u>

- Previous Investigations

  Soil and groundwater contaminants noted in the west and southwest sections of the former Maxwell Complex, and in the storage areas located east of Building 50. Well 2, the production well located in the boiler house and completed in the unconfined aquifer, was found to contain organic compounds. Testing suggested a large volume of the aquifer may be affected by the contaminants.

- Soil Vapor Survey

  Areas with elevated VOCs in the area to the north of Building 59 to the area of Building 47 and the associated waste storage area with VOCs elevated in both the shallow and deep vadose zone and greater contamination noted in the deep vadose zone.

- Soil Samples

  Affected areas are to the north of Building 59, in the area near Building 47 extending northward and toward the east; and in the area north of the boiler house and northeast of Building 47.

- Groundwater

  Areas affected by contamination are the area to the north of Building 59; the area near Building 47 extending northward and toward the west; and the area north and west of the boiler house.

<u>Area C</u>

- Soil Vapor Survey

  Isolated areas of elevated VOCs were noted in the southern portion of the site to the west of Building 3A and south of Building 59, and in the area to the south of Buildings 40 and 40A. This pattern was noted for both the shallow and deep portions of the vadose zone, with greater contamination noted in the deep vadose zone.

- Soil Samples

  Areas affected by contamination are adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40, 40A and 40B.

- Groundwater

  Areas affected by contamination are the area adjacent to Leo Street south of Building 59, Building 3A, and Buildings 40A and 40B.

The patterns of contamination by the principal mapped contaminants in the soil and groundwater, tetrachloroethylene and trichloroethene, suggest a contaminant transport mechanism involving interactions between the soil and groundwater. The patterns of soil and groundwater contamination may be explained using the available information in the following conceptual model for Areas A and B, and for Area C of the site.

Area A and Area B

The soil contamination as seen across Area A and Area B in the soil vapor and soil sample analysis is typically greater in the deeper portions of the vadose zone soils, with the clear exception of the area of the former TCA tanks where significant vadose zone soil contamination both shallow and deep suggests this is a primary source location of solvent contamination to the soils. Other possible secondary contaminant source areas include the area to the east of Building 50 and the waste storage area near Building 47 north of Building 59. Previous studies and the pattern of contamination found in this investigation identified the subsurface beneath Buildings 40A and 40B as potential contaminant source areas.

Solvents containing chlorinated organic compounds are interpreted to have entered the subsurface environment at these source locations. After soil contaminants penetrated to a depth near the base of the vadose zone, groundwater in the unconfined aquifer was brought in contact with the contaminated soil allowing contaminants to be released into the groundwater. Groundwater flow in the unconfined aquifer moved the groundwater toward the northeast under the influence of the steepening hydraulic gradient induced by the pumping well at Gem City Chemicals, Inc. The groundwater flowing past the contaminant sources acquired dissolved contaminants and carried the contaminants across the site toward the northeast forming contamination plumes.

The steepening hydraulic gradient which was persistently seen in all water elevation maps is interpreted to represent the influence of the groundwater recovery well system at the Gem City Chemical facility as it draws groundwater toward the pumping well. The recovery well pumps continuously in the unconfined aquifer at approximately 300 gpm. The pumping well was required by the Ohio EPA to prevent introduction of contaminants from Gem City Chemical into the South Miami Well Field. The groundwater elevation maps show a generally non-uniform groundwater elevation change, producing a variable gradient, across the subject site from the southwest toward the northeast in all three measurement sets. The uniformity of the hydraulic conditions were maintained as water levels fell in the unconfined aquifer, indicating the pumping well exerted primary hydraulic control over the groundwater flow pattern. This interpretation is in agreement with the potentiometric measurements for the Gem City site as reported by QSource Engineering, Inc. QSource Engineering reported that changes in water levels and recharge do not appear to affect the general direction of groundwater flow. QSource Engineering estimated the groundwater flow direction was to the northeast in the portion of the Gem City site adjacent to the DTPP site. This flow direction and the reported configuration of the groundwater potentiometric surface agree closely between the two sites, further demonstrating the interconnection between pumping at Gem City and the behavior of the groundwater across the DTPP property.

As groundwater moved toward the northeast carrying dissolved contaminants from the source locations, the soils in contact with the moving groundwater plumes absorbed some of the contaminants. This formed broad soil contamination plumes and may account for the similarity in location and pattern for both the soil contaminant and groundwater contaminant plumes as mapped. The areas of the greatest soil contamination and greatest groundwater contamination are coincident. Seasonal fluctuations in water levels (reported annual total of 10 to 15 feet) would be expected to exacerbate this situation over time, causing an additional vertical thickness of soil near the base of the vadose zone to be exposed to the dissolved contaminants in the groundwater. Under these conditions, the potential for off-site transport of contaminants is significant over time, first as dissolved groundwater contamination, and secondly as soil contamination near the base of the vadose zone. As shown on the isoconcentration maps, the potential exists at present for some off-site transport of contaminants in groundwater to have occurred.

Additional supporting evidence for this mechanism comes in two forms. First, larger numbers of organic compounds having greater concentration levels are present in the groundwater samples from the unconfined aquifer in the MWA (shallower) wells than the MWB (deeper) wells. Overall VOC contamination is greater in the shallow portion of the unconfined aquifer in contact with the deep vadose zone than the deeper portions of the same aquifer. Second, seasonal water level fluctuations as observed during this investigation appeared to remove groundwater from contacting the zone of contaminated soil. As the water levels fell during the three month period of this investigation, the level of groundwater contamination by VOCs decreased.

Area C

Groundwater flows to the north onto the site from across Leo Street. The soil and groundwater contamination plume shown in Area C appears to originate from some off-site source, particularly from the area across Leo Street from the site boundary as groundwater flows on the site from adjacent properties. Certain properties in this area have been identified as potential sources of contaminants. The soil contamination as seen across Area C in both the soil vapor survey and the soil sample analysis is typically greater in the deeper portions of the vadose zone soils, and has trichloroethene as the primary compound present. The available information for the soil in the shallow vadose zone provided no clear indication of a source area for chlorinated solvents on the property. The soil vapor survey did not identify significantly elevated levels of VOCs in the shallow vadose zone in Area C. This evidence supports the idea of an off-site source for the contaminants.

A soil sample from SB-10 was collected from below the water table at 31 feet and was found to contain significantly elevated levels of VOCs, particularly trichloroethene, in the saturated soil approximately four feet below the water table. It may be interpreted that this contaminant is flowing on the property from an off-site source to the south. Additional supporting evidence for an off-site contaminant source is the presence of benzene in both rounds of groundwater samples collected from MWB-3 when that compound is not a contaminant of concern at any other location on the site. Benzene is a contaminant typically associated with petroleum and may have entered the subsurface environment from a leaking storage tank, or possibly from some operation at the former paint and varnish operation located across Leo Street from the site boundary.

A hydraulic connection between the MWC-3 well and the unconfined aquifer apparently occurs because the till layer seen in the southeastern portion of the site becomes substantially thinner and ceases to be a hydraulic barrier in the east central portion of the site. The till layer has apparently protected the portion of the unconfined aquifer below the till layer in the extreme southeastern portion of Area C from encountering significant contamination by organic compounds. The MWB-3 well, completed in the unconfined aquifer above the till layer, was found to have up to 13,727.6 ppb total VOCs in a groundwater sample. Both groundwater samples collected from MWC-3, completed in the unconfined aquifer below the till layer, were found to have less than detectable levels of total VOCs.

Groundwater flowing in the unconfined aquifer moves northward toward the cone of influence developed by the Gem City recovery well. The groundwater within the unconfined aquifer is interpreted to pass this point both above and below the clay layer within the unconfined aquifer. This pattern of groundwater movement apparently prevents contaminants entering the aquifer from the ground surface from impacting the portion of the unconfined aquifer below the clay layer in which MWC-3 is screened. The clay layer is expected to extend intact to the south (on the opposite side of Leo Street) a distance at least as great as the distance to the proposed contamination source.

The findings for both groundwater sampling rounds show the semi-confined aquifer does not appear to be affected by VOC contamination at this time. No VOCs were detected in any well completed in the semi-confined aquifer in either groundwater sampling round. The vertical flow potential provides an assessment of the potential for movement of groundwater, and potential contaminants, from one aquifer to another. The available information as compiled during regional hydrogeological analysis, and for the site specific information generated as a part of this investigation indicate the potential exists for groundwater to move downward from the unconfined aquifer to the semi-confined aquifer. The confining layer between the aquifers has apparently prevented contamination of the semi-confined aquifer based on the available information.

The metals concentrations in groundwater were similar in both the unconfined and semi-confined aquifers. Since the absence of VOC contamination in the semi-confined aquifer can be interpreted as an indication of no impact to that aquifer, the similarity of the dissolved metals concentrations in the aquifers may be interpreted as evidence of no significant impact to groundwater in either aquifer by the targeted metals at this time. The metals contamination in soils as encountered in the area of the former Maxwell Complex was apparently confined to the soils present in that limited area.

Section 10.0 - Targets for Soil and Groundwater Remediation

The following discussion of targets for soil and groundwater remediation are presented as guidance for development of goals for remediation of soil and groundwater contamination at the Chrysler DTPP facility.

The Ohio EPA Division of Emergency and Remedial Response has developed guidance for site investigations and remediation programs. Ohio EPA evaluates every site independently and will not provide generic clean-up guidance or criteria. The policy was originally developed for unregulated hazardous waste sites but has been extended to the entire Ohio EPA Remedial Response Program.

The selection of soil and groundwater remediation targets typically begins with a determination of the levels of site contamination through a site investigation. A site is considered to be hazardous by the Ohio EPA if a contaminant is present on-site at concentrations significantly above background levels, or the contaminant is present on-site and is not detected in representative background samples. The DTPP facility appears to fall in the hazardous site category based on the findings of this investigation.

Ohio EPA guidance stipulates a determination of whether contamination poses a threat to public health or the environment. Normally this involves preparation of a site-specific health-based risk assessment for most locations within Ohio. Following preparation of the risk assessment, a review of applicable ARARs (applicable or relevant and appropriate standards and/or criteria) is usually undertaken. The selection of remedial alternatives and design goals normally results from these activities. However, an overriding issue in Dayton is the delineation of a portion of Dayton in the area of the DTPP facility as a Well Field Protection Area.

Mr. Joe Smindak of the Ohio EPA was contacted regarding this issue on April 25, 1995. Mr. Smindak indicated that the Well Field Protection Program instituted in Dayton is a nationally recognized program which seeks to monitor the public water supply source aquifer, and has as a future goal the development of a comprehensive Well Field Management Plan. This management plan has not yet been initiated but will be based on the findings of the Ohio EPA groundwater quality monitoring program now underway. The Ohio EPA routinely monitors groundwater using a network of wells installed throughout Dayton in public lands and right-of-ways. Mr. Smindak noted that the management plan is needed primarily because groundwater quality monitoring has shown organic contaminants are commonly dispersed across large areas in the subsurface throughout Dayton. The contaminants are commonly organic solvents which have found their way into the aquifer due to a long history of manufacturing land uses, and the effects of pumping from numerous water supply wells in Dayton. The contaminants are known to enter the aquifer near certain properties, and pass under other properties where they may be detected at monitoring points and in water supply wells. Mr. Smindak stated that at some point in the future a program to address these large areas of contaminants will be brought forward by the Ohio EPA.

The Ohio EPA currently seeks only to prevent significant contamination from reaching the public water supply wells through a program of Interim Action requirements. Interim Actions for groundwater are the only approved remedial actions which may be undertaken within the Well Field Protection Area. Groundwater gradient control is the most commonly required Interim Action. The need for groundwater gradient control is based on what Ohio EPA has defined as Interim Standards. If an Interim Standard for groundwater quality is exceeded at a site, then Ohio EPA seeks to have the property owner control and remediate contaminated groundwater to prohibit it from leaving the effected property. The process of calculating the Interim Standard for a site involves review of the following standards:

- Carcinogenic standards for each detected compound which will produce a frequency of 10^{-6} cancer cases (one cancer case per million population exposed) in the effected population;
- Non-carcinogenic standards for each detected compound which will produce a Hazard Index of 1 for the effected population;
- Maximum Contaminant Levels (MCLs) derived from US EPA drinking water regulations and health advisories.

The lowest value resulting from the review of the three standards listed above becomes the Interim Standard for the detected compound, provided the standard is not less than 1 ppb. In those cases 1 ppb becomes the Interim Standard. Under the Interim Actions process only the groundwater pathway is assessed, and no cumulative or synergistic effects are incorporated into the risk analysis. Achieving protection of the groundwater within the Well Field Protection Area is done by meeting the Interim Standard set for each detected contaminant. If the detected contaminant levels are below the Interim Standards, then there is no requirement to achieve groundwater gradient control and perform any treatment of extracted groundwater.

Interim Standards were applied to the remedial actions which have been undertaken at the DAP, Inc. and the Gem City Chemicals, Inc. facilities. The DAP facility employed a soil vapor extraction system to remove the contaminant source within the soil as a method of preventing groundwater contamination. DAP achieved groundwater gradient control using a system of four groundwater recovery wells plus an air stripping tower to remove a variety of solvents from the groundwater. Routine monitoring of wells at the site demonstrated groundwater quality has improved to within the Interim Standards, and the recovery wells are expected to be shut down in the near future.

Gem City Chemicals, Inc. achieved groundwater gradient control using a groundwater recovery well and an associated air stripper system. A soil vapor extraction system was also employed to remediate the soil which was contributing contaminants to the groundwater. The soil vapor extraction system was discontinued when no significant concentration of VOCs (≤5 ppm) were detected in the exhausted air. Groundwater gradient control and remediation continues on an ongoing basis using a single recovery well.

Interim Standards were computed using the laboratory results for the organic compounds detected in both the first and second round groundwater samples from the subject site. The detected concentrations were averaged for the MWA and MWB wells for each compound detected, using both the first and second round samples. The carcinogenic standard or hazard index was taken from the Risk Based Concentration (RBC) tables prepared by US EPA Region III, as recommended by the Ohio EPA, for each detected compound. The reported RBC value corresponds to a contaminant concentration exposure concentration through a certain pathway which produces a fixed level of risk, either the hazard index of 1 or lifetime cancer risk of 10^{-6} whichever occurs at a lower concentration. The RBC value for water (tap water) as a pathway was used. The MCLs were taken from the November 1994 US EPA Drinking Water Regulations and Health Advisory tables.

Interim Standards for Detected VOCs in Groundwater

VOCs	Averaged Concentration	RBC Value	MCLs	Ohio EPA Interim Standard	Interim Standard Exceeded?
tetrachloroethylene	777	1.1	5	1.1	**Yes**
trichloroethene	7107	1.6	None	1.6	**Yes**
benzene	2.3	0.36	5	1.0	**Yes**
1,2-dichloroethene (total)	3101	55	None	55	**Yes**
cis-1,2 dichloroethylene	3097	61	70	61	**Yes**
trans-1,2 dichloroethylene	21.7	120	100	100	No
1,1,1-trichloroethane	1981	1300	200	200	**Yes**
1,1,2-trichloroethane	2.6	0.19	5	1.0	**Yes**
chloroform	2.9	0.15	100	1.0	**Yes**
1,1-dichloroethane	134	810	None	810	No
1,2 -dichloroethane	11.6	0.12	5	1.0	**Yes**
1,1-dichloroethene	111	0.044	7	1.0	**Yes**
trichlorofluoromethane	3.0	1300	None	1300	No
dichlorodifluoromethane	90.2	390	None	390	No
vinyl chloride	317	0.019	2	1.0	**Yes**
1,2-dichlorobenzene	1.8	270	75	75	No
1,1-dichloropropene	2.2	None	None	None	----
1,1,2-trichloroethane	2.2	0.19	5	1.0	**Yes**
1,1,1,2-tetrachloroethane	1.4	0.41	None	1.0	**Yes**
chloromethane	8.3	1.4	None	1.4	**Yes**
chloroethane	2.0	8600	None	8600	No

All Results in Parts per Billion (ug/l).

Fourteen of the twenty-one detected volatile organic compounds exceed the Interim Standards for those compounds. The Interim Standards may be viewed as goals for groundwater remediation at the Chrysler DTPP facility.

References

1. Clean Tech, Site Assessment Summary, March 1994.

2. Mathes & Associates, Soil Gas Investigation, May 1991.

3. Mathes & Associates, Status Report and Recommendations Environmental Site Assessment, August 1991.

4. Clean Tech, Work Plan for Investigation, Chrysler Corporation DTPP, August 1994.

5. Clean Tech, Health and Safety Plan for Investigation, Chrysler Corporation DTPP, August 1994.

6. Q Source Engineering, Inc., Revision of the Site Assessment Report for Gem City Chemicals, Inc. Dayton Ohio, July 1993.

7. U.S. Geological Survey, S.E. Norris, Vertical Leakage Through Till as a Source of Recharge to a Buried-Valley Aquifer at Dayton Ohio, 1959.

8. State of Ohio Dept. of Nat. Res. Div. of Water, Ground-Water Resources of the Valley-Train Deposits in the Fairborn Area, Ohio, W. C. Walton and G. D. Scudder, 1960

9. U.S. Geological Survey Prof. Paper 1270, H. T. Shacklette and J. G. Boerngen, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, 1984.

10. The Fate of Hazardous Materials in Soil, J. Dragun, 1988.

INTEROFFICE MEMORANDUM

TO: Gary Stanczuk

CC: Ken Vogel

FROM: Kristin Yahnke

DATE: May 4, 2000

SUBJECT: Dayton – Occurrence of PCBs

INTRODUCTION

During the two sewer cleaning events, PCBs have been detected in the liquid, sludges, free phase product, and rinse waters from the sewer lines associated with Buildings 40, 40A, 40B, and 50 and in soil removed to gain access to these sewers. Also, PCBs have been detected in the free phase product from the wells on the south end of Building 40B. The PCBs that have been detected are Aroclor 1254 and Aroclor 1260. The purpose of this correspondence is to describe general historical uses and characteristics of PCBs as well as summarize the occurrences of PCBs at DaimlerChrysler Dayton Thermal Products.

HISTORY OF PCB USE

Polychlorinated Biphenyls (PCBs) were produced in the United States from 1929 through the mid 1970s. The utility of PCB mixtures is based on their chemical stability, low flammability, and electrical insulating properties. The most common use for PCBs was as dielectric fluid in capacitors and transformers. PCB mixtures have also been used in the following applications:

- heat transfer fluids,
- hydraulic fluids,
- vacuum pumps,
- lubricating and cutting oils,
- fire retardants, and
- additives in pesticides, paints, copying paper, adhesives, sealants, and plastics.

Monsanto manufactured PCBs under the trade name Aroclor. A four digit naming convention is also part of the trade name Aroclor. The first two digits indicate that the mixture contains biphenyls (12), triphenyls (54), or both (25, 44). The last two digits give the weight percent of chlorine in the mixture. For example Aroclor 1254 contains 54% by weight chlorine and Aroclor 1260 contains 60% by weight chlorine. The following table lists other trade names for products and mixtures containing PCBs.

The Trade Names And Other Designations Of PCB Products And Mixtures Containing PCBs

Aceclor (t)	Dk (t,c)	P-296
Apirolio (t,c)	Duconol (c)	PCB
Aroclor (t,c)	Dykanol (t,c)	PCBs
Arubren	EEC-18	Phenoclor (t,c)
Asbestol (t,c)	Elemex (t,c)	Polychlorinated biphenyl
Askarel	Eucarel	Polychlorobiphenyl
Bakola 131 (t,c)	Fenchlor (t,c)	Pydraul
Biclor (c)	Geskol	Pyralene (t,c)
Chlorextol (t)	Hlvar (c)	Pyranol (t,c)
Chlorinated Biphenyl	Hydol (t,c)	Pyroclor (t)
Chlorinated Diphenyl	Inclor	S-42
Chlorinol	Inerteen (t,c)	Saf-T-Kuhl (t,c)
Chlorobiphenyl	Kanechlor (t,c)	Santotherm
Clophen (t,c)	Kennachor (t,c)	Santhotherm FR
Clorphen (t)	Montar	Santovac 1 and 2
Chlorofen	Monter	Siclonyl (c)
Declor	Nepolin	Solvol (t,c)
Ciaclor (t,c)	Nitrosovol	Theminol FR
Dialor (c)	No-Flamol(t,c)	Trichlorodiphenyl
Disconon (c)	P-53	Turbinol

t = used in transformers
c = used in capacitors

PCBs may be a small component of lubricants and hydraulic oils. PCB lubricants were sold under the tradenames such and Pydraul™ and Turbinol™. Aroclor 1254 was present in chlorinated rubber coatings of metals for resistance to acids, alkalis, oxidation and electrical conductivity. A mixture of 1254 and 1260 was used in vapor seals. Aroclor 1242 was identified as the dielectric liquid.

CHARACTERISTICS OF AROCLOR 1254 AND 1260

In the environment, PCBs are generally found in soil. The chemical stability of PCBs is attractive for industrial applications, but environmentally it results in recalcitrant compounds. Dermal contact with PCBs result in skin irritation and PCBs are a probable human carcinogen. Thermal destruction is the method to mitigate PCB containing material.

Aroclor 1254 is a light yellow viscous liquid, denser than water (specific gravity = 1.54), and has a low water solubility (12 ug/L). Aroclor 1260 is a light yellow, soft, sticky resin, denser than water (specific gravity = 1.62) and has a low water solubility (3 ug/L). With the low water solubilities of these compounds, the presence of Aroclor in the sewer rinse waters is indicative that the sewer lines have been in contact with material containing high concentrations of Aroclor.

DETECTIONS AT DTP

The attached plate identifies sewer cleanout sample locations for PCBs (Aroclors) and contains a summary table of detections. Attached at the end of the correspondence is a table of all samples collected by LBG at the site and analyzed for PCBs.

As indicated on the plate, the detections of PCBs are primarily localized in Buildings 40, 40A and 40B. Aroclor 1254 was detected at these locations. Free product containing PCB was also identified in the sump outside of Building 50. The occurrence of PCBs seems to correspond to the area of the plant where a majority of the production activities occur.

The free product from wells MW-21S, MW-22S, and SVE-11D, located on the south end of Building 40B, has also been sampled. Aroclor 1254 and 1260 has been detected in these samples. Aroclor 1260 has only been detected in the free product samples collected from MW-22S and SVE-11D. The source of this free product has not been determined.

All site-monitoring wells were sampled for PCBs during February 2000. The samples were all non-detect for PCBs.

DISCUSSION

Review of the distribution of PCB detections indicates that their occurrence is associated with plant production areas where use of lubricating and/or hydraulic oils has been observed. It is possible that the presence of PCBs in the sewer lines in Buildings 40, 40A, 40B, and 50 are related to historical uses of oils containing PCBs and that these oils/sludges were trapped in non-active sewer lines, not mobilizing until sewer cleaning activities. A review of historic production activities and materials may provide information regarding the occurrence of PCBs. Another possible scenario is that the plant is currently utilizing lubricating and/or hydraulic oil that contains low levels of PCBs. These oils could be recycled, or manufactured outside of the US. An audit of current plant activities, including the analysis of material used in production, would identify an ongoing source of PCBs.

The occurrence of PCBs in the Building 50 separator (WL0005) may be indicative that there is an active source of PCBs at the facility. In September 1998, that separator was cleaned and all liquids/sludges were removed. In December 1999, the separator contained liquid and free product, whose source has not been determined. In reviewing the site map, the sewer line that connects(ed) to the Building 50 separator may terminate in the Power House where a known release of PCBs occurred and the line is adjacent to Building 49 where PCBs are reported to be (have been) stored. It is recommended that further evaluation of sewer connections in these areas be conducted.

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
AS001	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MW007S	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MW010S	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MW011S	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MW015S	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MW020S	02/12/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWA001	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWA002	02/12/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWA003	02/27/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWA004	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWA005	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWA006	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWB001	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWB002	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWB003	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWB004	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWB005	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWB006	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWC001	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWC002	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
MWC003	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PURGEWATER	02/12/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ007I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ008D	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ008I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ009D	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ010I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ012D	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ012I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ013I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ014I	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ015I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ016D	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ017D	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ017I	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ019I	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ020D	02/12/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ021I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
PZ022I	02/01/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
SOUTH SUMP	09/15/1998	11096-82-5	Aroclor 1260	1000.0	U		WATER
SVE-11 PRODUCT	09/15/1998	11096-82-5	Aroclor 1260	1080.0	J		WATER
WEST SUMP	09/15/1998	11096-82-5	Aroclor 1260	1000.0	U		WATER
WL00001BP	10/03/1998	11096-82-5	Aroclor 1260	1.0	U	UG/L	WATER
WL00002	10/03/1998	11096-82-5	Aroclor 1260	1.0	U	UG/L	WATER
WL0004	11/22/1999	11096-82-5	Aroclor 1260	1.9	U	UG/L	WATER
WL0006	11/30/1999	11096-82-5	Aroclor 1260	1.0	U	UG/L	WATER

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
WL0008	12/09/1999	11096-82-5	Aroclor 1260	95.0	U	UG/L	WATER
WL0009	01/07/2000	11096-82-5	Aroclor 1260	95.0	U	UG/L	WATER
WL0010	01/11/2000	11096-82-5	Aroclor 1260	1.9	U	UG/L	WATER
WL0011	01/11/2000	11096-82-5	Aroclor 1260	96.0	U	UG/L	WATER
WL0012	01/16/2000	11096-82-5	Aroclor 1260	95.0	U	UG/L	WATER
WL2611	12/20/1999	11096-82-5	Aroclor 1260	0.5	U	UG/L	WATER
WL3191	02/28/2000	11096-82-5	Aroclor 1260	2.0	U	UG/L	WATER
WL33511	11/29/1999	11096-82-5	Aroclor 1260	1.9	U	UG/L	WATER
WL40J1	01/28/2000	11096-82-5	Aroclor 1260	96.0	U	UG/L	WATER
WL40K1	01/31/2000	11096-82-5	Aroclor 1260	19.0	U	UG/L	WATER
WL41011	11/23/1999	11096-82-5	Aroclor 1260	1.9	U	UG/L	WATER
WL41092	12/13/1999	11096-82-5	Aroclor 1260	0.5	U	UG/L	WATER
WL41141	12/20/1999	11096-82-5	Aroclor 1260	0.5	U	UG/L	WATER
WL41171	01/06/2000	11096-82-5	Aroclor 1260	100.0	U	UG/L	WATER
WL49011	11/22/1999	11096-82-5	Aroclor 1260	95.0	U	UG/L	WATER
WLDRUM1	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
WLDRUM2	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/L	WATER
DP013-1-4	03/14/1999	11096-82-5	Aroclor 1260	34.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	11096-82-5	Aroclor 1260	34.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP076-2-4'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP080-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP084-6-8'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP087-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
DP088-2-4'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	11096-82-5	Aroclor 1260		ND	UG/KG	SOIL
SP01CP01	09/15/1998	11096-82-5	Aroclor 1260	37.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	11096-82-5	Aroclor 1260	150.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	11096-82-5	Aroclor 1260	150.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	11096-82-5	Aroclor 1260	150.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	11096-82-5	Aroclor 1260	39.0	U	UG/KG	SOIL
SP01TP02	07/27/1999	11096-82-5	Aroclor 1260	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	11096-82-5	Aroclor 1260	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	11096-82-5	Aroclor 1260	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	11096-82-5	Aroclor 1260	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	11096-82-5	Aroclor 1260	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	11096-82-5	Aroclor 1260	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	11096-82-5	Aroclor 1260	37.0	U	UG/KG	SOIL
SP02TP04	07/28/1999	11096-82-5	Aroclor 1260	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	11096-82-5	Aroclor 1260	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	11096-82-5	Aroclor 1260	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	11096-82-5	Aroclor 1260	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	11096-82-5	Aroclor 1260	35.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	11096-82-5	Aroclor 1260	35.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	11096-82-5	Aroclor 1260	35.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	11096-82-5	Aroclor 1260	40.0	U	UG/KG	SOIL
TB006-3-5	12/12/1997	11096-82-5	Aroclor 1260	45.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	11096-82-5	Aroclor 1260	37.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	11096-82-5	Aroclor 1260	37.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	11096-82-5	Aroclor 1260	35.0	U	UG/KG	SOIL
WS00001	10/02/1998	11096-82-5	Aroclor 1260	39.0	U	UG/KG	SOIL
WS21368	02/12/2000	11096-82-5	Aroclor 1260	38.0	U	UG/KG	SOIL
WS34120	02/12/2000	11096-82-5	Aroclor 1260	18.0	U	UG/KG	SOIL
WS34121	02/12/2000	11096-82-5	Aroclor 1260	3.5	U	UG/KG	SOIL
WS35413	02/12/2000	11096-82-5	Aroclor 1260	36.0	U	UG/KG	SOIL
WS40730	02/12/2000	11096-82-5	Aroclor 1260	36.0	U	UG/KG	SOIL
WS42176	02/12/2000	11096-82-5	Aroclor 1260	18.0	U	UG/KG	SOIL
WS44182	02/12/2000	11096-82-5	Aroclor 1260	3.6	U	UG/KG	SOIL
WS44184	02/12/2000	11096-82-5	Aroclor 1260	73.0	U	UG/KG	SOIL
WS44188	02/12/2000	11096-82-5	Aroclor 1260	35.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	11096-82-5	Aroclor 1260	3.4	U	UG/KG	SOIL
BLANK	00000000	11096-82-5	Aroclor 1260	0.1	U	UG/WIPE	WIPE
MW021S-Product	02/12/2000	11096-82-5	Aroclor 1260	500.0	U	UG/KG	OIL
MW022S-Product	02/12/2000	11096-82-5	Aroclor 1260	2330.0	J	UG/KG	OIL
WIPE001	12/10/1999	11096-82-5	Aroclor 1260	0.1	U	UG/WIPE	WIPE
WL0005	11/23/1999	11096-82-5	Aroclor 1260	25000.0	U	UG/KG	OIL
WL0007	12/09/1999	11096-82-5	Aroclor 1260	500.0	U	UG/KG	OIL
WS00003	01/11/2000	11096-82-5	Aroclor 1260	400.0	U	UG/KG	SLUDGE
WS40I2	01/31/2000	11096-82-5	Aroclor 1260	2200.0	U	UG/KG	SLUDGE
AS001	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MW007S	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MW010S	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MW011S	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
MW015S	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MW020S	02/12/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWA001	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWA002	02/12/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWA003	02/27/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWA004	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWA005	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWA006	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWB001	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWB002	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWB003	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWB004	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWB005	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWB006	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWC001	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWC002	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
MWC003	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PURGEWATER	02/12/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ007I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ008D	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ008I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ009D	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ010I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ012D	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ012I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ013I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ014I	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ015I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ016D	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ017D	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ017I	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ019I	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ020D	02/12/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ021I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
PZ022I	02/01/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
WL00001BP	10/03/1998	11097-69-1	Aroclor 1254	20.0	P	UG/L	WATER
WL00002	10/03/1998	11097-69-1	Aroclor 1254	43.0	P	UG/L	WATER
WL0004	11/22/1999	11097-69-1	Aroclor 1254	32.9		UG/L	WATER
WL0006	11/30/1999	11097-69-1	Aroclor 1254	57.0		UG/L	WATER
WL0008	12/09/1999	11097-69-1	Aroclor 1254	95.0	U	UG/L	WATER
WL0009	01/07/2000	11097-69-1	Aroclor 1254	95.0	U	UG/L	WATER
WL0010	01/11/2000	11097-69-1	Aroclor 1254	1.9	U	UG/L	WATER
WL0011	01/11/2000	11097-69-1	Aroclor 1254	96.0	U	UG/L	WATER
WL0012	01/16/2000	11097-69-1	Aroclor 1254	95.0	U	UG/L	WATER
WL2611	12/20/1999	11097-69-1	Aroclor 1254	3.3		UG/L	WATER
WL3191	02/28/2000	11097-69-1	Aroclor 1254	240.0		UG/L	WATER

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
WL33511	11/29/1999	11097-69-1	Aroclor 1254	13.9		UG/L	WATER
WL40J1	01/28/2000	11097-69-1	Aroclor 1254	9290.0		UG/L	WATER
WL40K1	01/31/2000	11097-69-1	Aroclor 1254	874.0		UG/L	WATER
WL41011	11/23/1999	11097-69-1	Aroclor 1254	52.7		UG/L	WATER
WL41092	12/13/1999	11097-69-1	Aroclor 1254	5.2		UG/L	WATER
WL41141	12/20/1999	11097-69-1	Aroclor 1254	2.2	J	UG/L	WATER
WL41171	01/06/2000	11097-69-1	Aroclor 1254	370.0	J	UG/L	WATER
WL49011	11/22/1999	11097-69-1	Aroclor 1254	0.9		UG/L	WATER
WLDRUM1	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
WLDRUM2	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/L	WATER
DP013-1-4	03/14/1999	11097-69-1	Aroclor 1254	24.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	11097-69-1	Aroclor 1254	23.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP076-2-4'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP080-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP084-6-8'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP087-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP088-2-4'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	11097-69-1	Aroclor 1254		ND	UG/KG	SOIL
SP01CP01	09/15/1998	11097-69-1	Aroclor 1254	26.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	11097-69-1	Aroclor 1254	100.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	11097-69-1	Aroclor 1254	100.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	11097-69-1	Aroclor 1254	100.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	11097-69-1	Aroclor 1254	39.0	U	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
SP01TP02	07/27/1999	11097-69-1	Aroclor 1254	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	11097-69-1	Aroclor 1254	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	11097-69-1	Aroclor 1254	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	11097-69-1	Aroclor 1254	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	11097-69-1	Aroclor 1254	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	11097-69-1	Aroclor 1254	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	11097-69-1	Aroclor 1254	37.0	U	UG/KG	SOIL
SP02TP04	07/28/1999	11097-69-1	Aroclor 1254	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	11097-69-1	Aroclor 1254	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	11097-69-1	Aroclor 1254	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	11097-69-1	Aroclor 1254	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	11097-69-1	Aroclor 1254	35.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	11097-69-1	Aroclor 1254	35.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	11097-69-1	Aroclor 1254	35.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	11097-69-1	Aroclor 1254	40.0	U	UG/KG	SOIL
TB006-3-5	12/12/1997	11097-69-1	Aroclor 1254	45.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	11097-69-1	Aroclor 1254	37.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	11097-69-1	Aroclor 1254	37.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	11097-69-1	Aroclor 1254	35.0	U	UG/KG	SOIL
WS00001	10/02/1998	11097-69-1	Aroclor 1254	61.0		UG/KG	SOIL
WS21368	02/12/2000	11097-69-1	Aroclor 1254	320.0		UG/KG	SOIL
WS34120	02/12/2000	11097-69-1	Aroclor 1254	18.0	U	UG/KG	SOIL
WS34121	02/12/2000	11097-69-1	Aroclor 1254	123.0		UG/KG	SOIL
WS35413	02/12/2000	11097-69-1	Aroclor 1254	720.0		UG/KG	SOIL
WS40730	02/12/2000	11097-69-1	Aroclor 1254	310.0		UG/KG	SOIL
WS42176	02/12/2000	11097-69-1	Aroclor 1254	18.0	U	UG/KG	SOIL
WS44182	02/12/2000	11097-69-1	Aroclor 1254	6.5	J	UG/KG	SOIL
WS44184	02/12/2000	11097-69-1	Aroclor 1254	73.0	U	UG/KG	SOIL
WS44188	02/12/2000	11097-69-1	Aroclor 1254	35.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	11097-69-1	Aroclor 1254	3.4	U	UG/KG	SOIL
MW021S-Product	02/12/2000	11097-69-1	Aroclor 1254	2400.0	J	UG/KG	OIL
MW022S-Product	02/12/2000	11097-69-1	Aroclor 1254	1600.0	J	UG/KG	OIL
WIPE001	12/10/1999	11097-69-1	Aroclor 1254	0.4	J	UG/WIPE	WIPE
WL00001TP	10/02/1998	11097-69-1	Aroclor 1254	11000.0	P	NUG/KG	XX
WL0005	11/23/1999	11097-69-1	Aroclor 1254	260000.0		UG/KG	OIL
WL0007	12/09/1999	11097-69-1	Aroclor 1254	500.0	U	UG/KG	OIL
WS00003	01/11/2000	11097-69-1	Aroclor 1254	2100.0		UG/KG	SLUDGE
WS4012	01/31/2000	11097-69-1	Aroclor 1254	51000.0		UG/KG	SLUDGE
AS001	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MW007S	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MW010S	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MW011S	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MW015S	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MW020S	02/12/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWA001	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWA002	02/12/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWA003	02/27/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWA004	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWA005	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
MWA006	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWB001	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWB002	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWB003	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWB004	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWB005	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWB006	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWC001	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWC002	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
MWC003	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PURGEWATER	02/12/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ007I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ008D	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ008I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ009D	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ010I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ012D	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ012I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ013I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ014I	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ015I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ016D	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ017D	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ017I	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ019I	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ020D	02/12/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ021I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
PZ022I	02/01/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
WL00001BP	10/03/1998	12672-29-6	Aroclor 1248	1.0	U	UG/L	WATER
WL00002	10/03/1998	12672-29-6	Aroclor 1248	1.0	U	UG/L	WATER
WL0004	11/22/1999	12672-29-6	Aroclor 1248	1.9	U	UG/L	WATER
WL0006	11/30/1999	12672-29-6	Aroclor 1248	1.0	U	UG/L	WATER
WL0008	12/09/1999	12672-29-6	Aroclor 1248	95.0	U	UG/L	WATER
WL0009	01/07/2000	12672-29-6	Aroclor 1248	95.0	U	UG/L	WATER
WL0010	01/11/2000	12672-29-6	Aroclor 1248	1.9	U	UG/L	WATER
WL0011	01/11/2000	12672-29-6	Aroclor 1248	96.0	U	UG/L	WATER
WL0012	01/16/2000	12672-29-6	Aroclor 1248	95.0	U	UG/L	WATER
WL2611	12/20/1999	12672-29-6	Aroclor 1248	0.5	U	UG/L	WATER
WL3191	02/28/2000	12672-29-6	Aroclor 1248	2.0	U	UG/L	WATER
WL33511	11/29/1999	12672-29-6	Aroclor 1248	1.9	U	UG/L	WATER
WL40J1	01/28/2000	12672-29-6	Aroclor 1248	96.0	U	UG/L	WATER
WL40K1	01/31/2000	12672-29-6	Aroclor 1248	19.0	U	UG/L	WATER
WL41011	11/23/1999	12672-29-6	Aroclor 1248	1.9	U	UG/L	WATER
WL41092	12/13/1999	12672-29-6	Aroclor 1248	0.5	U	UG/L	WATER
WL41141	12/20/1999	12672-29-6	Aroclor 1248	0.5	U	UG/L	WATER
WL41171	01/06/2000	12672-29-6	Aroclor 1248	100.0	U	UG/L	WATER

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
WL49011	11/22/1999	12672-29-6	Aroclor 1248	95.0	U	UG/L	WATER
WLDRUM1	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
WLDRUM2	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/L	WATER
DP013-1-4	03/14/1999	12672-29-6	Aroclor 1248	24.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	12672-29-6	Aroclor 1248	23.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP076-2-4'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP080-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP084-6-8'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP087-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP088-2-4'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	12672-29-6	Aroclor 1248		ND	UG/KG	SOIL
SP01CP01	09/15/1998	12672-29-6	Aroclor 1248	26.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	12672-29-6	Aroclor 1248	100.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	12672-29-6	Aroclor 1248	100.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	12672-29-6	Aroclor 1248	100.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	12672-29-6	Aroclor 1248	39.0	U	UG/KG	SOIL
SP01TP02	07/27/1999	12672-29-6	Aroclor 1248	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	12672-29-6	Aroclor 1248	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	12672-29-6	Aroclor 1248	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	12672-29-6	Aroclor 1248	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	12672-29-6	Aroclor 1248	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	12672-29-6	Aroclor 1248	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	12672-29-6	Aroclor 1248	37.0	U	UG/KG	SOIL

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
SP02TP04	07/28/1999	12672-29-6	Aroclor 1248	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	12672-29-6	Aroclor 1248	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	12672-29-6	Aroclor 1248	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	12672-29-6	Aroclor 1248	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	12672-29-6	Aroclor 1248	17.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	12672-29-6	Aroclor 1248	17.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	12672-29-6	Aroclor 1248	17.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	12672-29-6	Aroclor 1248	20.0	U	UG/KG	SOIL
TB006-3-5	12/12/1997	12672-29-6	Aroclor 1248	23.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	12672-29-6	Aroclor 1248	19.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	12672-29-6	Aroclor 1248	19.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	12672-29-6	Aroclor 1248	18.0	U	UG/KG	SOIL
WS00001	10/02/1998	12672-29-6	Aroclor 1248	27.0	U	UG/KG	SOIL
WS21368	02/12/2000	12672-29-6	Aroclor 1248	38.0	U	UG/KG	SOIL
WS34120	02/12/2000	12672-29-6	Aroclor 1248	18.0	U	UG/KG	SOIL
WS34121	02/12/2000	12672-29-6	Aroclor 1248	3.5	U	UG/KG	SOIL
WS35413	02/12/2000	12672-29-6	Aroclor 1248	36.0	U	UG/KG	SOIL
WS40730	02/12/2000	12672-29-6	Aroclor 1248	36.0	U	UG/KG	SOIL
WS42176	02/12/2000	12672-29-6	Aroclor 1248	18.0	U	UG/KG	SOIL
WS44182	02/12/2000	12672-29-6	Aroclor 1248	3.6	U	UG/KG	SOIL
WS44184	02/12/2000	12672-29-6	Aroclor 1248	73.0	U	UG/KG	SOIL
WS44188	02/12/2000	12672-29-6	Aroclor 1248	35.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	12672-29-6	Aroclor 1248	3.4	U	UG/KG	SOIL
MW021S-Product	02/12/2000	12672-29-6	Aroclor 1248	500.0	U	UG/KG	OIL
MW022S-Product	02/12/2000	12672-29-6	Aroclor 1248	500.0	U	UG/KG	OIL
WIPE001	12/10/1999	12672-29-6	Aroclor 1248	0.1	U	UG/WIPE	WIPE
WL0005	11/23/1999	12672-29-6	Aroclor 1248	25000.0	U	UG/KG	OIL
WL0007	12/09/1999	12672-29-6	Aroclor 1248	500.0	U	UG/KG	OIL
WS00003	01/11/2000	12672-29-6	Aroclor 1248	400.0	U	UG/KG	SLUDGE
WS40I2	01/31/2000	12672-29-6	Aroclor 1248	2200.0	U	UG/KG	SLUDGE
AS001	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MW007S	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MW010S	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MW011S	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MW015S	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MW020S	02/12/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWA001	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWA002	02/12/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWA003	02/27/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWA004	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWA005	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWA006	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWB001	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWB002	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWB003	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWB004	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWB005	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWB006	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWC001	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
MWC002	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
MWC003	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PURGEWATER	02/12/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ007I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ008D	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ008I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ009D	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ010I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ012D	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ012I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ013I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ014I	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ015I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ016D	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ017D	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ017I	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ019I	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ020D	02/12/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ021I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
PZ022I	02/01/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
WL00001BP	10/03/1998	53469-21-9	Aroclor 1242	1.0	U	UG/L	WATER
WL00002	10/03/1998	53469-21-9	Aroclor 1242	1.0	U	UG/L	WATER
WL0004	11/22/1999	53469-21-9	Aroclor 1242	1.9	U	UG/L	WATER
WL0006	11/30/1999	53469-21-9	Aroclor 1242	1.0	U	UG/L	WATER
WL0008	12/09/1999	53469-21-9	Aroclor 1242	95.0	U	UG/L	WATER
WL0009	01/07/2000	53469-21-9	Aroclor 1242	95.0	U	UG/L	WATER
WL0010	01/11/2000	53469-21-9	Aroclor 1242	1.9	U	UG/L	WATER
WL0011	01/11/2000	53469-21-9	Aroclor 1242	96.0	U	UG/L	WATER
WL0012	01/16/2000	53469-21-9	Aroclor 1242	95.0	U	UG/L	WATER
WL2611	12/20/1999	53469-21-9	Aroclor 1242	0.5	U	UG/L	WATER
WL3191	02/28/2000	53469-21-9	Aroclor 1242	2.0	U	UG/L	WATER
WL33511	11/29/1999	53469-21-9	Aroclor 1242	1.9	U	UG/L	WATER
WL40J1	01/28/2000	53469-21-9	Aroclor 1242	96.0	U	UG/L	WATER
WL40K1	01/31/2000	53469-21-9	Aroclor 1242	19.0	U	UG/L	WATER
WL41011	11/23/1999	53469-21-9	Aroclor 1242	1.9	U	UG/L	WATER
WL41092	12/13/1999	53469-21-9	Aroclor 1242	0.5	U	UG/L	WATER
WL41141	12/20/1999	53469-21-9	Aroclor 1242	0.5	U	UG/L	WATER
WL41171	01/06/2000	53469-21-9	Aroclor 1242	100.0	U	UG/L	WATER
WL49011	11/22/1999	53469-21-9	Aroclor 1242	95.0	U	UG/L	WATER
WLDRUM1	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
WLDRUM2	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/L	WATER
DP013-1-4	03/14/1999	53469-21-9	Aroclor 1242	24.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	53469-21-9	Aroclor 1242	23.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
DP076-2-4'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP080-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP084-6-8'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP087-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP088-2-4'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	53469-21-9	Aroclor 1242		ND	UG/KG	SOIL
SP01CP01	09/15/1998	53469-21-9	Aroclor 1242	26.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	53469-21-9	Aroclor 1242	100.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	53469-21-9	Aroclor 1242	100.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	53469-21-9	Aroclor 1242	100.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	53469-21-9	Aroclor 1242	39.0	U	UG/KG	SOIL
SP01TP02	07/27/1999	53469-21-9	Aroclor 1242	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	53469-21-9	Aroclor 1242	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	53469-21-9	Aroclor 1242	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	53469-21-9	Aroclor 1242	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	53469-21-9	Aroclor 1242	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	53469-21-9	Aroclor 1242	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	53469-21-9	Aroclor 1242	37.0	U	UG/KG	SOIL
SP02TP04	07/28/1999	53469-21-9	Aroclor 1242	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	53469-21-9	Aroclor 1242	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	53469-21-9	Aroclor 1242	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	53469-21-9	Aroclor 1242	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	53469-21-9	Aroclor 1242	17.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	53469-21-9	Aroclor 1242	17.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	53469-21-9	Aroclor 1242	17.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	53469-21-9	Aroclor 1242	20.0	U	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
TB006-3-5	12/12/1997	53469-21-9	Aroclor 1242	23.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	53469-21-9	Aroclor 1242	19.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	53469-21-9	Aroclor 1242	19.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	53469-21-9	Aroclor 1242	18.0	U	UG/KG	SOIL
WS00001	10/02/1998	53469-21-9	Aroclor 1242	27.0	U	UG/KG	SOIL
WS21368	02/12/2000	53469-21-9	Aroclor 1242	38.0	U	UG/KG	SOIL
WS34120	02/12/2000	53469-21-9	Aroclor 1242	18.0	U	UG/KG	SOIL
WS34121	02/12/2000	53469-21-9	Aroclor 1242	3.5	U	UG/KG	SOIL
WS35413	02/12/2000	53469-21-9	Aroclor 1242	36.0	U	UG/KG	SOIL
WS40730	02/12/2000	53469-21-9	Aroclor 1242	36.0	U	UG/KG	SOIL
WS42176	02/12/2000	53469-21-9	Aroclor 1242	18.0	U	UG/KG	SOIL
WS44182	02/12/2000	53469-21-9	Aroclor 1242	3.6	U	UG/KG	SOIL
WS44184	02/12/2000	53469-21-9	Aroclor 1242	73.0	U	UG/KG	SOIL
WS44188	02/12/2000	53469-21-9	Aroclor 1242	35.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	53469-21-9	Aroclor 1242	3.4	U	UG/KG	SOIL
MW021S-Product	02/12/2000	53469-21-9	Aroclor 1242	500.0	U	UG/KG	OIL
MW022S-Product	02/12/2000	53469-21-9	Aroclor 1242	500.0	U	UG/KG	OIL
WIPE001	12/10/1999	53469-21-9	Aroclor 1242	0.1	U	UG/WIPE	WIPE
WL0005	11/23/1999	53469-21-9	Aroclor 1242	25000.0	U	UG/KG	OIL
WL0007	12/09/1999	53469-21-9	Aroclor 1242	500.0	U	UG/KG	OIL
WS00003	01/11/2000	53469-21-9	Aroclor 1242	400.0	U	UG/KG	SLUDGE
WS40I2	01/31/2000	53469-21-9	Aroclor 1242	2200.0	U	UG/KG	SLUDGE
AS001	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MW007S	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MW010S	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MW011S	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MW015S	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MW020S	02/12/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWA001	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWA002	02/12/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWA003	02/27/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWA004	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWA005	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWA006	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWB001	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWB002	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWB003	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWB004	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWB005	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWB006	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWC001	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWC002	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
MWC003	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PURGEWATER	02/12/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ007I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ008D	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ008I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ009D	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ010I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
PZ012D	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ012I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ013I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ014I	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ015I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ016D	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ017D	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ017I	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ019I	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ020D	02/12/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ021I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
PZ022I	02/01/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
WL00001BP	10/03/1998	11141-16-5	Aroclor 1232	1.0	U	UG/L	WATER
WL00002	10/03/1998	11141-16-5	Aroclor 1232	1.0	U	UG/L	WATER
WL0004	11/22/1999	11141-16-5	Aroclor 1232	1.9	U	UG/L	WATER
WL0006	11/30/1999	11141-16-5	Aroclor 1232	1.0	U	UG/L	WATER
WL0008	12/09/1999	11141-16-5	Aroclor 1232	95.0	U	UG/L	WATER
WL0009	01/07/2000	11141-16-5	Aroclor 1232	95.0	U	UG/L	WATER
WL0010	01/11/2000	11141-16-5	Aroclor 1232	1.9	U	UG/L	WATER
WL0011	01/11/2000	11141-16-5	Aroclor 1232	96.0	U	UG/L	WATER
WL0012	01/16/2000	11141-16-5	Aroclor 1232	95.0	U	UG/L	WATER
WL2611	12/20/1999	11141-16-5	Aroclor 1232	0.5	U	UG/L	WATER
WL3191	02/28/2000	11141-16-5	Aroclor 1232	2.0	U	UG/L	WATER
WL33511	11/29/1999	11141-16-5	Aroclor 1232	1.9	U	UG/L	WATER
WL40J1	01/28/2000	11141-16-5	Aroclor 1232	96.0	U	UG/L	WATER
WL40K1	01/31/2000	11141-16-5	Aroclor 1232	19.0	U	UG/L	WATER
WL41011	11/23/1999	11141-16-5	Aroclor 1232	1.9	U	UG/L	WATER
WL41092	12/13/1999	11141-16-5	Aroclor 1232	0.5	U	UG/L	WATER
WL41141	12/20/1999	11141-16-5	Aroclor 1232	0.5	U	UG/L	WATER
WL41171	01/06/2000	11141-16-5	Aroclor 1232	100.0	U	UG/L	WATER
WL49011	11/22/1999	11141-16-5	Aroclor 1232	95.0	U	UG/L	WATER
WLDRUM1	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
WLDRUM2	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/L	WATER
DP013-1-4	03/14/1999	11141-16-5	Aroclor 1232	34.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	11141-16-5	Aroclor 1232	34.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP076-2-4'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
DP080-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP084-6-8'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP087-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP088-2-4'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	11141-16-5	Aroclor 1232		ND	UG/KG	SOIL
SP01CP01	09/15/1998	11141-16-5	Aroclor 1232	37.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	11141-16-5	Aroclor 1232	150.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	11141-16-5	Aroclor 1232	150.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	11141-16-5	Aroclor 1232	150.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	11141-16-5	Aroclor 1232	39.0	U	UG/KG	SOIL
SP01TP02	07/27/1999	11141-16-5	Aroclor 1232	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	11141-16-5	Aroclor 1232	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	11141-16-5	Aroclor 1232	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	11141-16-5	Aroclor 1232	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	11141-16-5	Aroclor 1232	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	11141-16-5	Aroclor 1232	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	11141-16-5	Aroclor 1232	37.0	U	UG/KG	SOIL
SP02TP04	07/28/1999	11141-16-5	Aroclor 1232	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	11141-16-5	Aroclor 1232	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	11141-16-5	Aroclor 1232	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	11141-16-5	Aroclor 1232	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	11141-16-5	Aroclor 1232	17.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	11141-16-5	Aroclor 1232	17.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	11141-16-5	Aroclor 1232	17.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	11141-16-5	Aroclor 1232	20.0	U	UG/KG	SOIL
TB006-3-5	12/12/1997	11141-16-5	Aroclor 1232	23.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	11141-16-5	Aroclor 1232	19.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	11141-16-5	Aroclor 1232	19.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	11141-16-5	Aroclor 1232	18.0	U	UG/KG	SOIL
WS00001	10/02/1998	11141-16-5	Aroclor 1232	39.0	U	UG/KG	SOIL
WS21368	02/12/2000	11141-16-5	Aroclor 1232	38.0	U	UG/KG	SOIL
WS34120	02/12/2000	11141-16-5	Aroclor 1232	18.0	U	UG/KG	SOIL
WS34121	02/12/2000	11141-16-5	Aroclor 1232	3.5	U	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
WS35413	02/12/2000	11141-16-5	Aroclor 1232	36.0	U	UG/KG	SOIL
WS40730	02/12/2000	11141-16-5	Aroclor 1232	36.0	U	UG/KG	SOIL
WS42176	02/12/2000	11141-16-5	Aroclor 1232	18.0	U	UG/KG	SOIL
WS44182	02/12/2000	11141-16-5	Aroclor 1232	3.6	U	UG/KG	SOIL
WS44184	02/12/2000	11141-16-5	Aroclor 1232	73.0	U	UG/KG	SOIL
WS44188	02/12/2000	11141-16-5	Aroclor 1232	35.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	11141-16-5	Aroclor 1232	3.4	U	UG/KG	SOIL
MW021S-Product	02/12/2000	11141-16-5	Aroclor 1232	500.0	U	UG/KG	OIL
MW022S-Product	02/12/2000	11141-16-5	Aroclor 1232	500.0	U	UG/KG	OIL
WIPE001	12/10/1999	11141-16-5	Aroclor 1232	0.1	U	UG/WIPE	WIPE
WL0005	11/23/1999	11141-16-5	Aroclor 1232	25000.0	U	UG/KG	OIL
WL0007	12/09/1999	11141-16-5	Aroclor 1232	500.0	U	UG/KG	OIL
WS00003	01/11/2000	11141-16-5	Aroclor 1232	400.0	U	UG/KG	SLUDGE
WS40I2	01/31/2000	11141-16-5	Aroclor 1232	2200.0	U	UG/KG	SLUDGE
AS001	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MW007S	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MW010S	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MW011S	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MW015S	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MW020S	02/12/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWA001	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWA002	02/12/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWA003	02/27/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWA004	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWA005	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWA006	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWB001	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWB002	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWB003	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWB004	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWB005	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWB006	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWC001	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWC002	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
MWC003	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PURGEWATER	02/12/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ007I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ008D	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ008I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ009D	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ010I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ012D	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ012I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ013I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ014I	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ015I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
PZ016D	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ017D	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ017I	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ019I	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ020D	02/12/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ021I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
PZ022I	02/01/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
WL00001BP	10/03/1998	11104-28-2	Aroclor 1221	2.0	U	UG/L	WATER
WL00002	10/03/1998	11104-28-2	Aroclor 1221	1.9	U	UG/L	WATER
WL0004	11/22/1999	11104-28-2	Aroclor 1221	1.9	U	UG/L	WATER
WL0006	11/30/1999	11104-28-2	Aroclor 1221	1.0	U	UG/L	WATER
WL0008	12/09/1999	11104-28-2	Aroclor 1221	95.0	U	UG/L	WATER
WL0009	01/07/2000	11104-28-2	Aroclor 1221	95.0	U	UG/L	WATER
WL0010	01/11/2000	11104-28-2	Aroclor 1221	1.9	U	UG/L	WATER
WL0011	01/11/2000	11104-28-2	Aroclor 1221	96.0	U	UG/L	WATER
WL0012	01/16/2000	11104-28-2	Aroclor 1221	95.0	U	UG/L	WATER
WL2611	12/20/1999	11104-28-2	Aroclor 1221	0.5	U	UG/L	WATER
WL3191	02/28/2000	11104-28-2	Aroclor 1221	2.0	U	UG/L	WATER
WL33511	11/29/1999	11104-28-2	Aroclor 1221	1.9	U	UG/L	WATER
WL40J1	01/28/2000	11104-28-2	Aroclor 1221	96.0	U	UG/L	WATER
WL40K1	01/31/2000	11104-28-2	Aroclor 1221	19.0	U	UG/L	WATER
WL41011	11/23/1999	11104-28-2	Aroclor 1221	1.9	U	UG/L	WATER
WL41092	12/13/1999	11104-28-2	Aroclor 1221	0.5	U	UG/L	WATER
WL41141	12/20/1999	11104-28-2	Aroclor 1221	0.5	U	UG/L	WATER
WL41171	01/06/2000	11104-28-2	Aroclor 1221	100.0	U	UG/L	WATER
WL49011	11/22/1999	11104-28-2	Aroclor 1221	95.0	U	UG/L	WATER
WLDRUM1	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
WLDRUM2	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/L	WATER
DP013-1-4	03/14/1999	11104-28-2	Aroclor 1221	45.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	11104-28-2	Aroclor 1221	44.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP076-2-4'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP080-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
DP084-6-8'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP087-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP088-2-4'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	11104-28-2	Aroclor 1221		ND	UG/KG	SOIL
SP01CP01	09/15/1998	11104-28-2	Aroclor 1221	49.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	11104-28-2	Aroclor 1221	200.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	11104-28-2	Aroclor 1221	200.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	11104-28-2	Aroclor 1221	200.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	11104-28-2	Aroclor 1221	39.0	U	UG/KG	SOIL
SP01TP02	07/27/1999	11104-28-2	Aroclor 1221	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	11104-28-2	Aroclor 1221	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	11104-28-2	Aroclor 1221	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	11104-28-2	Aroclor 1221	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	11104-28-2	Aroclor 1221	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	11104-28-2	Aroclor 1221	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	11104-28-2	Aroclor 1221	37.0	U	UG/KG	SOIL
SP02TP04	07/28/1999	11104-28-2	Aroclor 1221	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	11104-28-2	Aroclor 1221	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	11104-28-2	Aroclor 1221	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	11104-28-2	Aroclor 1221	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	11104-28-2	Aroclor 1221	17.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	11104-28-2	Aroclor 1221	17.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	11104-28-2	Aroclor 1221	17.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	11104-28-2	Aroclor 1221	20.0	U	UG/KG	SOIL
TB006-3-5	12/12/1997	11104-28-2	Aroclor 1221	23.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	11104-28-2	Aroclor 1221	19.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	11104-28-2	Aroclor 1221	19.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	11104-28-2	Aroclor 1221	18.0	U	UG/KG	SOIL
WS00001	10/02/1998	11104-28-2	Aroclor 1221	51.0	U	UG/KG	SOIL
WS21368	02/12/2000	11104-28-2	Aroclor 1221	90.0	U	UG/KG	SOIL
WS34120	02/12/2000	11104-28-2	Aroclor 1221	41.0	U	UG/KG	SOIL
WS34121	02/12/2000	11104-28-2	Aroclor 1221	8.3	U	UG/KG	SOIL
WS35413	02/12/2000	11104-28-2	Aroclor 1221	85.0	U	UG/KG	SOIL
WS40730	02/12/2000	11104-28-2	Aroclor 1221	86.0	U	UG/KG	SOIL
WS42176	02/12/2000	11104-28-2	Aroclor 1221	43.0	U	UG/KG	SOIL
WS44182	02/12/2000	11104-28-2	Aroclor 1221	8.4	U	UG/KG	SOIL
WS44184	02/12/2000	11104-28-2	Aroclor 1221	170.0	U	UG/KG	SOIL
WS44188	02/12/2000	11104-28-2	Aroclor 1221	83.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	11104-28-2	Aroclor 1221	8.1	U	UG/KG	SOIL
MW021S-Product	02/12/2000	11104-28-2	Aroclor 1221	500.0	U	UG/KG	OIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
MW022S-Product	02/12/2000	11104-28-2	Aroclor 1221	500.0	U	UG/KG	OIL
WIPE001	12/10/1999	11104-28-2	Aroclor 1221	0.1	U	UG/WIPE	WIPE
WL0005	11/23/1999	11104-28-2	Aroclor 1221	25000.0	U	UG/KG	OIL
WL0007	12/09/1999	11104-28-2	Aroclor 1221	500.0	U	UG/KG	OIL
WS00003	01/11/2000	11104-28-2	Aroclor 1221	940.0	U	UG/KG	SLUDGE
WS40I2	01/31/2000	11104-28-2	Aroclor 1221	5100.0	U	UG/KG	SLUDGE
AS001	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MW007S	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MW010S	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MW011S	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MW015S	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MW020S	02/12/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWA001	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWA002	02/12/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWA003	02/27/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWA004	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWA005	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWA006	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWB001	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWB002	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWB003	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWB004	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWB005	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWB006	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWC001	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWC002	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
MWC003	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PURGEWATER	02/12/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ007I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ008D	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ008I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ009D	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ010I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ012D	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ012I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ013I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ014I	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ014I/DUP	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ014I/DUP2	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ015I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ015I/DUP	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ016D	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ017D	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ017I	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ019I	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ020D	02/12/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ021I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
PZ022I	02/01/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
WL00001BP	10/03/1998	12674-11-2	Aroclor 1016	1.0	U	UG/L	WATER

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
WL00002	10/03/1998	12674-11-2	Aroclor 1016	1.0	U	UG/L	WATER
WL0004	11/22/1999	12674-11-2	Aroclor 1016	1.9	U	UG/L	WATER
WL0006	11/30/1999	12674-11-2	Aroclor 1016	1.0	U	UG/L	WATER
WL0008	12/09/1999	12674-11-2	Aroclor 1016	95.0	U	UG/L	WATER
WL0009	01/07/2000	12674-11-2	Aroclor 1016	95.0	U	UG/L	WATER
WL0010	01/11/2000	12674-11-2	Aroclor 1016	1.9	U	UG/L	WATER
WL0011	01/11/2000	12674-11-2	Aroclor 1016	96.0	U	UG/L	WATER
WL0012	01/16/2000	12674-11-2	Aroclor 1016	95.0	U	UG/L	WATER
WL2611	12/20/1999	12674-11-2	Aroclor 1016	0.5	U	UG/L	WATER
WL3191	02/28/2000	12674-11-2	Aroclor 1016	2.0	U	UG/L	WATER
WL33511	11/29/1999	12674-11-2	Aroclor 1016	1.9	U	UG/L	WATER
WL40J1	01/28/2000	12674-11-2	Aroclor 1016	96.0	U	UG/L	WATER
WL40K1	01/31/2000	12674-11-2	Aroclor 1016	19.0	U	UG/L	WATER
WL41011	11/23/1999	12674-11-2	Aroclor 1016	1.9	U	UG/L	WATER
WL41092	12/13/1999	12674-11-2	Aroclor 1016	0.5	U	UG/L	WATER
WL41141	12/20/1999	12674-11-2	Aroclor 1016	0.5	U	UG/L	WATER
WL41171	01/06/2000	12674-11-2	Aroclor 1016	100.0	U	UG/L	WATER
WL49011	11/22/1999	12674-11-2	Aroclor 1016	95.0	U	UG/L	WATER
WLDRUM1	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
WLDRUM2	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/L	WATER
DP013-1-4	03/14/1999	12674-11-2	Aroclor 1016	34.0	U	UG/KG	SOIL
DP013-4-8	03/14/1999	12674-11-2	Aroclor 1016	34.0	U	UG/KG	SOIL
DP075-14-16'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP075-2-4'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP075-6-8'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP076-2-4'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP076-6-8'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP077-10-12'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP077-14-16'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP078-6-8'	02/02/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP079-14-16'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP079-18-20'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP079-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP080-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP081-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP081-8-12'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP082-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP082-6-8'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP083-18-20'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP083-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP084-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP084-6-8'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP085-10-12'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP085-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP086-1-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP086-1-4'/DUP	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP086-14-16'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP087-14-16'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP087-18-20'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL

DAYTON THERMAL PRODUCTS
DAYTON, OHIO

Summary of PCB Samples Collected
(positive detections are shaded)

MP_ID	DATESAMP	CAS	PARAMETER	RESULT	QUAL	UNITS	MATRIX
DP087-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP087-5-8'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP087-5-8'/DUP	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP088-2-4'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
DP088-6-8'	02/03/2000	12674-11-2	Aroclor 1016		ND	UG/KG	SOIL
SP01CP01	09/15/1998	12674-11-2	Aroclor 1016	37.0	U	UG/KG	SOIL
SP01SB01-4-6	09/15/1998	12674-11-2	Aroclor 1016	150.0	U	UG/KG	SOIL
SP01SB02-4-5	09/15/1998	12674-11-2	Aroclor 1016	150.0	U	UG/KG	SOIL
SP01SB03-4-5	09/15/1998	12674-11-2	Aroclor 1016	150.0	U	UG/KG	SOIL
SP01TP01	07/27/1999	12674-11-2	Aroclor 1016	39.0	U	UG/KG	SOIL
SP01TP02	07/27/1999	12674-11-2	Aroclor 1016	39.0	U	UG/KG	SOIL
SP01TP03	07/27/1999	12674-11-2	Aroclor 1016	39.0	U	UG/KG	SOIL
SP01TP04	07/27/1999	12674-11-2	Aroclor 1016	39.0	U	UG/KG	SOIL
SP01TP05	07/27/1999	12674-11-2	Aroclor 1016	38.0	U	UG/KG	SOIL
SP02TP01	07/28/1999	12674-11-2	Aroclor 1016	38.0	U	UG/KG	SOIL
SP02TP02	07/28/1999	12674-11-2	Aroclor 1016	36.0	U	UG/KG	SOIL
SP02TP03	07/28/1999	12674-11-2	Aroclor 1016	37.0	U	UG/KG	SOIL
SP02TP04	07/28/1999	12674-11-2	Aroclor 1016	37.0	U	UG/KG	SOIL
SP02TP05	07/28/1999	12674-11-2	Aroclor 1016	37.0	U	UG/KG	SOIL
SP03TP01	07/28/1999	12674-11-2	Aroclor 1016	34.0	U	UG/KG	SOIL
SP03TP02	07/28/1999	12674-11-2	Aroclor 1016	36.0	U	UG/KG	SOIL
TB001-7-9	12/11/1997	12674-11-2	Aroclor 1016	17.0	U	UG/KG	SOIL
TB003-13-15	12/11/1997	12674-11-2	Aroclor 1016	17.0	U	UG/KG	SOIL
TB004-14-16	12/12/1997	12674-11-2	Aroclor 1016	17.0	U	UG/KG	SOIL
TB004-3-5	12/12/1997	12674-11-2	Aroclor 1016	20.0	U	UG/KG	SOIL
TB006-3-5	12/12/1997	12674-11-2	Aroclor 1016	23.0	U	UG/KG	SOIL
TB009-3-5	12/13/1997	12674-11-2	Aroclor 1016	19.0	U	UG/KG	SOIL
TB010-1-3	12/13/1997	12674-11-2	Aroclor 1016	19.0	U	UG/KG	SOIL
TB012-5-7	12/13/1997	12674-11-2	Aroclor 1016	18.0	U	UG/KG	SOIL
WS00001	10/02/1998	12674-11-2	Aroclor 1016	39.0	U	UG/KG	SOIL
WS21368	02/12/2000	12674-11-2	Aroclor 1016	38.0	U	UG/KG	SOIL
WS34120	02/12/2000	12674-11-2	Aroclor 1016	18.0	U	UG/KG	SOIL
WS34121	02/12/2000	12674-11-2	Aroclor 1016	3.5	U	UG/KG	SOIL
WS35413	02/12/2000	12674-11-2	Aroclor 1016	36.0	U	UG/KG	SOIL
WS40730	02/12/2000	12674-11-2	Aroclor 1016	36.0	U	UG/KG	SOIL
WS42176	02/12/2000	12674-11-2	Aroclor 1016	18.0	U	UG/KG	SOIL
WS44182	02/12/2000	12674-11-2	Aroclor 1016	3.6	U	UG/KG	SOIL
WS44184	02/12/2000	12674-11-2	Aroclor 1016	73.0	U	UG/KG	SOIL
WS44188	02/12/2000	12674-11-2	Aroclor 1016	35.0	U	UG/KG	SOIL
WSPRESS18 UST	01/16/2000	12674-11-2	Aroclor 1016	3.4	U	UG/KG	SOIL
MW021S-Product	02/12/2000	12674-11-2	Aroclor 1016	500.0	U	UG/KG	OIL
MW022S-Product	02/12/2000	12674-11-2	Aroclor 1016	500.0	U	UG/KG	OIL
WIPE001	12/10/1999	12674-11-2	Aroclor 1016	0.1	U	UG/WIPE	WIPE
WL0005	11/23/1999	12674-11-2	Aroclor 1016	25000.0	U	UG/KG	OIL
WL0007	12/09/1999	12674-11-2	Aroclor 1016	500.0	U	UG/KG	OIL
WS00003	01/11/2000	12674-11-2	Aroclor 1016	400.0	U	UG/KG	SLUDGE
WS40I2	01/31/2000	12674-11-2	Aroclor 1016	2200.0	U	UG/KG	SLUDGE

CHRYSLER

December 17, 2007

Regulatory Affairs

Valerie J. Orr
Underground Injection Control Program
Ohio Environmental Protection Agency
Division of Drinking and Ground Waters
122 South Front Street,
Columbus, Ohio 43216-1049

RE: Renewal Application
UIC 05-57-10-PTD-V
Dayton Thermal Products
Dayton, Ohio.

Dear Ms. Orr:

Please find the requested four copies of the application for the "UIC Class V Injection Well for Remediation Application for area Permit to Operate" for the Dayton Thermal Products facility located in Dayton, Ohio.

Please feel free to contact me at 248-576-7365 if you need additional information.

Sincerely,

Gary M. Stanczuk
Remediation Specialist

For Office Use Only
PTO Application No. __________
FEE ______________________

DIVISION OF DRINKING AND GROUND WATERS
UNDERGROUND INJECTION CONTROL PROGRAM
CLASS V INJECTION WELL FOR REMEDIATION
APPLICATION FOR AREA PERMIT TO OPERATE

Dayton Thermal Products **3585**
Facility Name Primary SIC Code

Gary Stanczuk
Person to Contact

1600 Webster Street
Facility Address

800 Chrysler Drive East CIMS 482-00-51
Mailing Address

Dayton **Ohio** **45404**
City State Zip

Auburn Hills **Michigan** **48326-2757**
City State Zip

Area **937** Number **224-2900**
Telephone

Area **248** Number **576-7365**
Telephone

[] Federal [] State **[X] Private** [] Public [] Other
Entity Status (check one)

Yes [] **No [X]**
Is Facility on Indian Land?

Chrysler LLC, 1000 Chrysler Drive, Auburn Hills. MI 48326
If Corporation, Name and Address of Statutory Agency

South Plant: Section 5, North Plant: Section 6, T1 R7 Montgomery County
Location of tract of land where the proposed well is to located, including: Section or Lot Number, City/Village, Township and County

Latitude (North) 39.782570 - 39° 46' 57.3" Longitude (West) 84.182100 - 84° 10' 55.6"
Latitude and longitude of proposed well locations

Injection Wells: IW-1, IW-2, IW-3, IW-4, IW-5/EW-5, IW-6/EW-6, IW-5B
Designation of the wells by number and name

I, being the individual specified in Rule 3745-34-17 of the Ohio Administrative Code (OAC), hereby apply for a Permit to Operate the Underground Injection Well described herein.

Authorized Signature
(Pursuant to OAC Rule 3745-34-17)

Greg M Rose, Sr. Manager
Printed Name and Title

12-17-07
Date

Please be advised that this application must be accompanied by a non-refundable fee of $2,000.00 pursuant to OAC Rule 3745-34-16 (G)(1).
Please Note: Operation of an injection well without an effective Underground Injection Control Permit to Operate is prohibited pursuant to Ohio Revised Code 6111.044

DIVISION OF DRINKING AND GROUNDWATER
UNDERGROUND INJECTION CONTROL PROGRAM
CLASS V INJECTION WELL APPLICATION FOR AREA PERMIT TO OPERATE

1. **No. of Wells Proposed** **Max. Well Depth**
   Min. Well Depth **Ave. Elevation of Wells (GL)**

   A total of nine (9) injection wells were previously installed under a Permit to Install and seven (7) are used under the current groundwater remediation design under Permit to Operate UIC 05-57-10-PTD-V. A total of nine (9) injection wells are requested for this permit renewal. The injection wells were installed to a depth of approximately 80 feet (to the top of the glacial rich till zone) with the well screen interval extending from a depth of approximately 20 feet to 80 feet (60 feet of well screen). Average elevation of the injection wells is 750 feet +/- 5 feet above mean sea level (AMSL).

2. **Max. Inj. Rate (GPM)** **Avg. Inj. Rate (GPM)** **Max. Surf. Injection Pressure (PSGI)**

   The maximum injection rate per well is 45 gpm. The average injection rate per well is estimated to be 16 gpm. The maximum surface injection pressure per well is 30 psig.

3. **Name and Depth of Injection Zone** **KB to Ground Level**

   The injection zone is the Upper Great Miami Buried Valley Aquifer formation, a quaternary age valley fill sand and gravel outwash unit that extends from ground surface to a depth of approximately 80 feet. The saturated thickness of the Upper Great Miami Buried Valley Aquifer is approximately 60 feet. A glacial till rich zone, encountered at a depth of approximately 80 feet, separates the Upper and Lower sand and gravel units of the Great Miami Buried Valley Aquifer. The glacial till rich zone ranges in thickness from 25 to 5 feet. The depth of the injection zone is approximately 20 to 80 feet below ground surface in the Upper Great Miami Buried Valley Aquifer.

   KB to Ground Level: N/A.

4. **Provide a brief description of the nature of your firm's business.**

   The Dayton Thermal Products Plant is an automotive component manufacturing plant. Manufactured products include automotive thermal products including air conditioners, radiators, and ventilation systems.

5. **Provide a description of the nature and type of the Class V wells.**

   The Class V Injection Wells (aquifer remediation wells) were installed in conjunction with a site-wide groundwater remediation system for the facility. The groundwater remediation system consists of a groundwater extraction/injection system designed to contain the down-gradient migration of the contaminated groundwater at the south and east facility property boundaries and dose the up-gradient edge of the contaminant plume with sodium lactate to enhance the reductive dechlorination process. As this augmented groundwater travels from the injection wells down gradient to the extraction wells, reductive dechlorination will breakdown the chlorinated volatile organic compounds (CVOCs) present in the aquifer and remediate the groundwater beneath the facility.

6. **Describe activities conducted by the applicant which require that permits be obtained under the following environmental programs as applicable:**

   a) Resource Conservation & Recovery Act (RCRA);
   b) Underground Injection Control Program (UIC);
   c) The National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act, and Chapter 6111. of the Ohio Revised Code;* and
   d) The Prevention of Significant Deterioration Program (PSD) under the Clean Air Act and Chapter 3704. of the Ohio Revised Code.

<u>*Please Note:</u> **If liquid or semi-liquid wastes are discharged to a POTW, provide the POTW NPDES permit number.**

Activities conducted in conjunction with the groundwater remediation project which require a permit include:

- Construction, installation, and operation of Class V Injection Wells under the Underground Injection Control Program (UIC)
- Discharge from an air stripper system of approximately 100 gpm of treated groundwater under the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act (CWA) and Chapter 6111. of the Ohio Revised Code. NPDES permit # OH 000 9199

Currently there are no other groundwater remediation activities being conducted at the site that require a permit.

7. **Provide a listing of all permits or construction approvals received or applied for under any of the following programs:**

   a) Hazardous Waste Management Program under RCRA and Chapter 3734. of the Ohio Revised code;
   b) UIC Program under the Safe Drinking Water Act (SDWA) and Chapter 6111. of the Ohio Revised Code;
   c) NPDES Program under the Clean Water Act (CWA) and Chapter 611. of the Ohio Revised Code;
   d) The Prevention of Significant Deterioration Program (PSD) under the Clean Air Act and Chapter 3704. of the Ohio Revised Code;
   e) Nonattainment Program under the Clean Air Act and Chapter 3704. of the Ohio Revised Code;
   f) National Emission Standard of Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act of Chapter 32704. of the Ohio Revised Code.
   g) Ocean Dumping Permits under the Marine Protection Research and Sanctuaries Act;

h) **Dredge and Fill Permits under Section 404 of the CWA and Chapter 3745-32 of the Ohio Administrative Code; and**
i) **Other relevant environmental permits, including state permits.**

The permits applied for in conjunction with the groundwater remediation project include:

b. UIC Permit to Operate a Class V-Injection Well Area Permit for Remediation;
b. UIC Permit to Drill Permit to Drill (Construct and Install) a Class V – Injection Well Area Permit for Remediation
c. Modification of NPDES Permit #OH 000 9199

Existing / Operating permits currently in-place at the Dayton Thermal Facility include:

a. **Hazardous Waste Management Program under RCRA and Chapter 3734. of the Ohio Revised code:** OHD074703547
b. **UIC Program under the Safe Drinking Water Act (SDWA) and Chapter 6111. of the Ohio Revised Code:** None
c. **NPDES Program under the Clean Water Act (CWA) and Chapter 611. of the Ohio Revised Code:** OH0009199
d. **The Prevention of Significant Deterioration Program (PSD) under the Clean Air Act and Chapter 3704. of the Ohio Revised Code:** None
e. **Nonattainment Program under the Clean Air Act and Chapter 3704. of the Ohio Revised Code:** None
f. **National Emission Standard of Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act of Chapter 32704. of the Ohio Revised Code:** Facility ID: 0857040734, Source #'s P030-P040, P043-P049, P068, P100, P101, P102, P103, P104, FESOP, & T012.
g. **Ocean Dumping Permits under the Marine Protection Research and Sanctuaries Act:** None
h. **Dredge and Fill Permits under Section 404 of the CWA and Chapter 3745-32 of the Ohio Administrative Code:** None
i. **Other relevant environmental permits, including state permits:** Pretreatment Permit BEHR -071-02, issued by the City of Dayton for the plant Wastewater Treatment Plant.

8. **Provide a topographical map (or other map if a topographical map is unavailable) on a scale not smaller than four hundred feet to the inch, prepared by an Ohio Registered surveyor, extending one mile beyond the property boundaries of the source depicting the facility and each of its intake and discharge; each of its hazardous waste treatment, storage or disposal facilities, including but not limited to neutralization ponds, segregating or mixing tanks, and any solid waste disposal areas on site; each well where fluids from the facility are infected underground, including but not limited to known mines, mineral deposits, and other oil and gas reserves; and those wells, springs and other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a quarter mile of the facility property boundary. If the well is or is to be located within the excavations and workings of a mine, the map shall also include the**

location of such mine, the name of the mine, and the name of the person operating the mine.

The topographical map is presented in Attachment A.

9. **Describe the type of drilling/installation, completion, and injection equipment used and/or to be used.**

Drilling for the installation of the injection wells was completed using a Roto-Sonic drill rig. The injection wells were installed with a well screen interval extending from a depth of approximately 20 feet to 80 feet below ground surface. Wells consist of 6" PVC piping and well screens sized to match the formation materials. The well screen interval was backfilled with appropriately sized filter pack sand or natural in-situ formation materials. The interval from ground surface to the well screen was sealed with bentonite. A subterranean vault with a manhole was constructed for each well to house the injection well manifold equipment.

The injection process and associated equipment includes up to nine injection wells, four groundwater extraction wells, distribution piping, and sodium lactate/groundwater mixing equipment. The groundwater is pumped at a combined rate of up to 400 gpm from four extraction wells located along the south and east property boundary. Of the 400 gpm removed by the extraction wells, up to 300 gpm is injected back into the aquifer. Remaining extracted groundwater is treated with an air stripper system and discharged to the storm sewer system under an NPDES permit. The injected groundwater remains untreated and is augmented with sodium lactate prior to injection to promote reductive dechlorination of chlorinated VOCs. The water is managed to minimize alteration of the natural groundwater geochemistry (increased dissolved oxygen, etc.) during the sodium lactate dosing and injection process. The groundwater, augmented with sodium lactate, is injected at a rate of approximately 16 gpm (45 gpm maximum rate) at each injection well. Each injection well is fitted with an injection piping system that injects water through a drop pipe to approximately 36 feet below grade. Injection equipment and process flow diagrams are presented in Attachment B.

10. **Provide the dates that the wells will be/were drilled and constructed.**

Wells were drilled and constructed on the following dates: 7/3/2003, 10/13/2003, 10/15/2003, 10/16/2003, 10/17/2003, 10/22/2003, 10/25/2003, 10/26/2003. Construction of the groundwater remediation system and commencement of full-scale operation was completed in March 2004.

11. **Submit a construction narrative and as built engineering plans for the wells.**

Drilling for the installation of the injection wells was completed using a Rotosonic drill rig. The injection wells were installed with a well screen interval extending from a depth of approximately 20 feet to 80 feet below ground surface. Wells consist of 6" PVC piping and well screens sized to match the formation materials. The well screen interval was backfilled with appropriately sized filter pack sand or natural in-situ formation materials.

The interval from ground surface to the well screen was sealed with bentonite. Engineering plans and well logs for the wells are included in Attachment C.

12. If relevant, submit an anticipated maintenance and inspection schedule for the wells.

Maintenance of the injection wells occurs on an as needed basis. The injection wells are inspected quarterly at a minimum. The injection well performance is monitored by the groundwater remediation system program logic controller (PLC). Periodic cleaning of the wells may be conducted using 7% hydrogen peroxide solution.

13. Submit with this application a plan for plugging and abandonment the wells.

Where well abandonment is necessary, the well will either be completely filled with grout or such other material to prevent contaminants from entering ground water in compliance with the Ohio Administrative Code 3745-9-10 – "Abandonment of Test Holes and Wells".

14. Submit evidence of financial responsibility including surety bond, for other adequate assurance, such as financial statement or other materials acceptable to the Director.

This project was constructed by, and is operated and maintained by Chrysler LLC.

15. Submit a plan for the disposal of water or other waste substances generated during the operation of the well.

It is not anticipated that water or waste products will be generated in connection with the injection process. Up to approximately 400 gpm of groundwater is pumped by up to four groundwater extraction wells. The 400 gpm flow rate is segregated into two separate lines to allow flexibility in directing the water for air stripping or injection. A portion is treated with an air stripper system to reduce concentrations to meet applicable NPDES permit requirements and discharged to the storm sewer under an NPDES permit. The remaining amount of groundwater remains untreated and is augmented with sodium lactate prior to injection to promote reductive dechlorination of chlorinated volatile organic compounds present in the groundwater. Groundwater is either re-introduced into the aquifer through injection or discharged to the storm sewer under an NPDES permit.

16. Chemical composition and physical properties of the fluid injected including an analysis for all constituents listed in the primary drinking water regulation under Chapter 3745-81 of the Administrative Code.

The substance injected is groundwater, impacted with chlorinated volatile organic compounds, pumped from the south and east property boundary. The groundwater is augmented with sodium lactate prior to injection to promote the reductive dechlorination of the chlorinated volatile organic compounds present in the aquifer. The injected groundwater is captured down gradient of the injection wells by the extraction well capture zone located along the south and east property boundary. Travel time from the injection wells to the extraction wells is estimated to be one year based on groundwater flow modeling. The historical chemical composition of the impacted groundwater since January 2006, based on extracted groundwater passing through the system, is presented in Attachment D. Based on the information presented in Attachment D, the highest average concentration of groundwater pumped from the east and south property boundary and the requested injection permit concentration limits to account for uncertainty in the concentration analysis and fluctuations in groundwater quality are as follows:

Maximum Concentrations Observed and Requested Permit Limits

Chemical of Interest	Highest Concentration from Attachment D **(ug/l)**	Requested Permit Concentration Limits to Account for Uncertainty in the Analysis of Attachment D. **(ug/l)**
1,1,1-Trichloroethane	240	480
1,1-Dichloroethene	58	116
1,2-Dichloroethane	<1.0	10
Carbon Tetrachloride	<1.0	10
Cis-1, 2-Dichloroethene	180	360
Tetrachloroethene	280	560
Trichloroethene	860	1,720
Vinyl Chloride	22	44

The MSDS for sodium lactate is included in Attachment E.

17. Chemical characteristics of formation fluid, including complete chemical analysis;*

***Minimum analysis to include (provide reasons if any of the following are omitted):**

calcium	**chloride**	**total dissolved solids**	**strontium**
magnesium	**fluoride**	**potassium**	**cadmium**
sodium	**nitrate**	**manganese**	**iron**
carbonate	**conductivity**	**barium**	**pH**
bicarbonate	**temperature**	**boron**	
sulfate			

Chemical characteristics of the formation fluid are included in Attachment F.

18. **Geologic description of the injection zone including: name of formation; depth; thickness; and lithology.**

The injection zone is the Upper Great Miami Buried Valley Aquifer formation, a quaternary age valley fill sand and gravel outwash unit that extends from ground surface to a depth of approximately 80 feet. The saturated thickness of the Upper Great Miami Buried Valley Aquifer is approximately 60 feet. A glacial till rich zone, encountered at a depth of approximately 80 feet, separates the Upper and Lower sand and gravel units of the Great Miami Buried Valley Aquifer. The glacial till rich zone ranges in thickness from 25 to 5 feet. The depth of the injection zone is approximately 20 to 80 feet below ground surface in the Upper Great Miami Buried Valley Aquifer.

19. **If relevant, for an existing well being converted to a Class V well or a permit renewal, provide a chronology of all major workovers and well malfunctions, a brief description of reasons for the well failure, and the corrective actions taken.**

During initial re-injection, overflow of the wells into the manholes was observed after continuous pumping. This was deemed to be due to excessive growth of biomass around the well, as a result of the lactate added to the groundwater. Several actions were taken to attempt to remedy this situation. Remedies included intermittent injection, injection at a lower rate than the initial design, and sealing of the manhole and injection well. Most recently, wells were cleaned using low volumes of 7% hydrogen peroxide solution (approximately one volume of the well annular space) to remove biomass within the immediate vicinity of the wells. Lactate addition was then altered from a continuous, low dosage scheme to an intermittent, high dosage scheme. The daily mass of lactate injected is equivalent in both schemes, however the current intermittent scheme allows for flushing of the well, reducing the biofouling of the injection wells.

20. **Provide a map showing the injection well(s) for which a permit is sought and the applicable area of review. The area of review shall be one-quarter mile beyond the injection well(s). Within the area of review, the map must show the number or name, and location of:**

a. **all producing oil and natural gas wells** (None Identified);
b. **injection wells** (As Shown);
c. **abandoned wells** (None Identified);
d. **dry holes** (None Identified);
e. **surface bodies of water** (None Identified);
f. **springs** (None Identified);
g. **mines (surface and subsurface)** (None Identified);
h. **quarries** (None Identified);
i. **water supply wells** (As Shown);
j. **other pertinent surface features including residences and roads** (As Shown); **and**
k. **faults, if known or suspected** (None Identified).

The applicable area of review is presented in Attachment G.

21. **Provide maps and cross sections indicating the general vertical and lateral limits of all underground sources of drinking water within the area of review, their position relative to the injection formation and the direction of water movement where known, in each underground source of drinking water which may be affected by the proposed injection.**

The following text is the description of geologic units for the North Dayton Area (pages 44 and 45) from the Ground-Water Resources of the Dayton Area, Ohio U.S. Geological Survey Water Supply Paper 1808. The maps and cross-sections referenced in the text are presented in Attachment H.

NORTH DAYTON AREA

Geologic sections D-D' and D'-D" illustrate the character of the valley-fill deposits in the northern part of Dayton. Section D-D' is based on meager data, chiefly that from wells drilled at the plants of the Dayton Castings Co., Premier Rubber Co., and the Chrysler Airtemp Sales Corp., but it is presented to show that in this area, too, the valley fill deposits evidently are separated by till into an upper and a lower sand and gravel aquifer, similar to generally prevailing conditions in the Dayton Area.

Geologic section D'-D" is drawn northward from the corner of Troy and Valley Streets through the Miami River well field of the City of Dayton, on the west bank of the Miami River approximately 3.5 miles northeast of the center of Dayton. Logs of wells drilled at the Miami River well field clearly show the till-rich zone, which separates the sand and gravel deposits into an upper and lower aquifer. The upper aquifer, lying immediately beneath the soil and the river alluvium, consists of 30 – 40 feet of coarse sand and gravel, into which the Miami River has cut its channel. Beneath the upper aquifer are deposits of till, reported in nearly all the well logs, constituting a well defined till-rich zone between depths of about 40 to 90 feet.

Beneath the till-rich zone at the Miami River well field are 50 – 70 feet of coarse sand and gravel. The lower sand and gravel aquifer is generally underlain by till, which in turn overlies the shale bedrock. Most wells are screened between depths of about 65 and 130 feet, as the test holes records show that in this interval the sand and gravel deposits are coarsest.

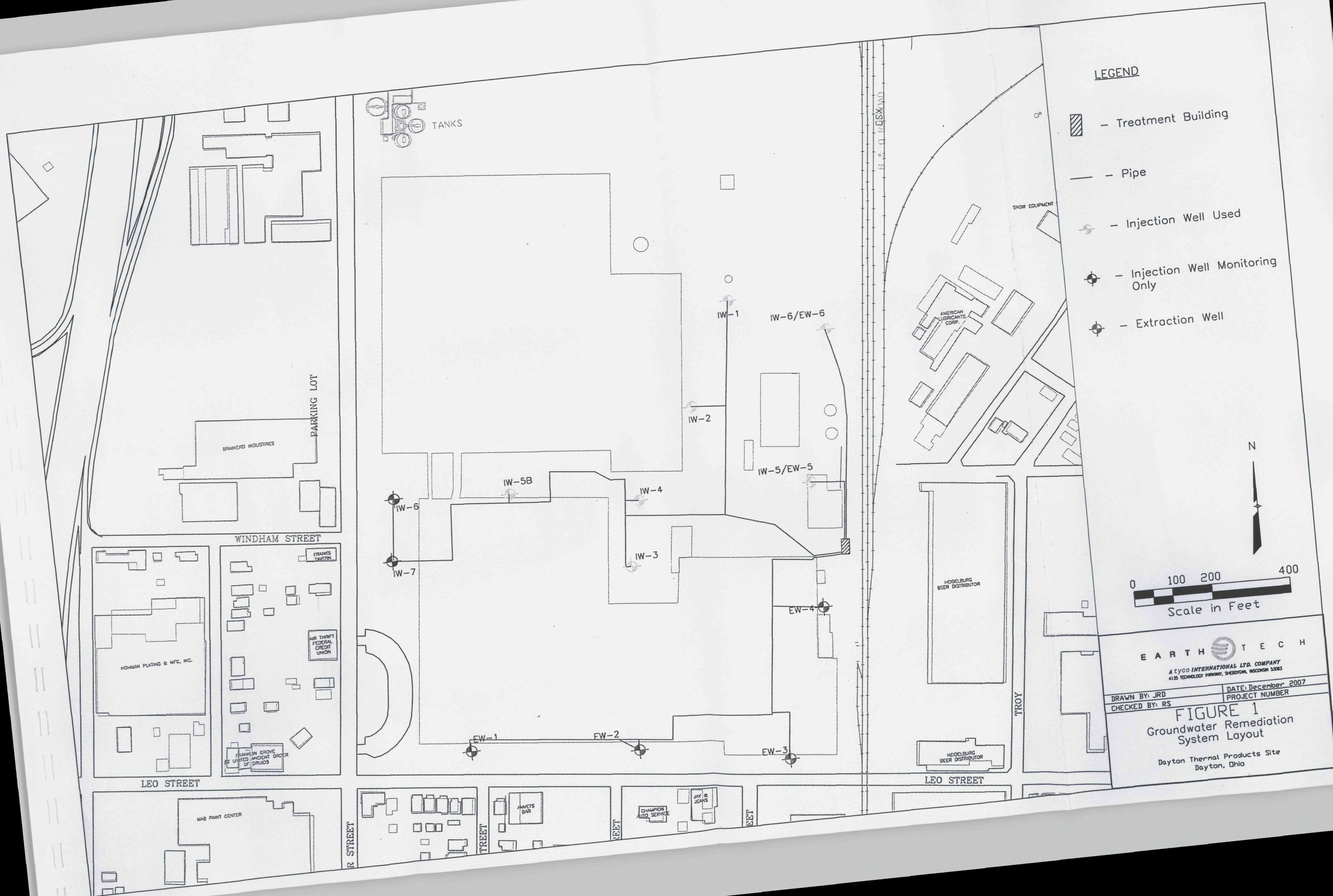
Within the area of review, the Great Miami Buried Valley Aquifer is a quaternary age valley fill sand and gravel outwash unit that is separated into an upper and lower aquifer unit by a glacial till rich zone, encountered at a depth of approximately 80 feet. The glacial till rich zone ranges in thickness from 25 to 5 feet. The saturated thickness of the Upper Great Miami Buried Valley Aquifer is approximately 60 feet and the depth of the injection zone is approximately 20 to 80 feet below ground surface. The Lower Great Miami Buried Valley Aquifer is likely 60 to 100 feet thick sequence of outwash sand and gravel deposits. In the area of review, the groundwater flow direction of the Great Miami Buried Valley Aquifer is predominantly from the northwest to the south and southeast.

Based on the USGS investigations, the Great Miami Buried Valley Aquifer in the area of review is underlain by glacial till, which in turn overlies shale bedrock. The glacial till and the shale bedrock are not used as a source of drinking water in the area of review.

Completed by [signature]

Title Sr. Manager

Date 12-17-07

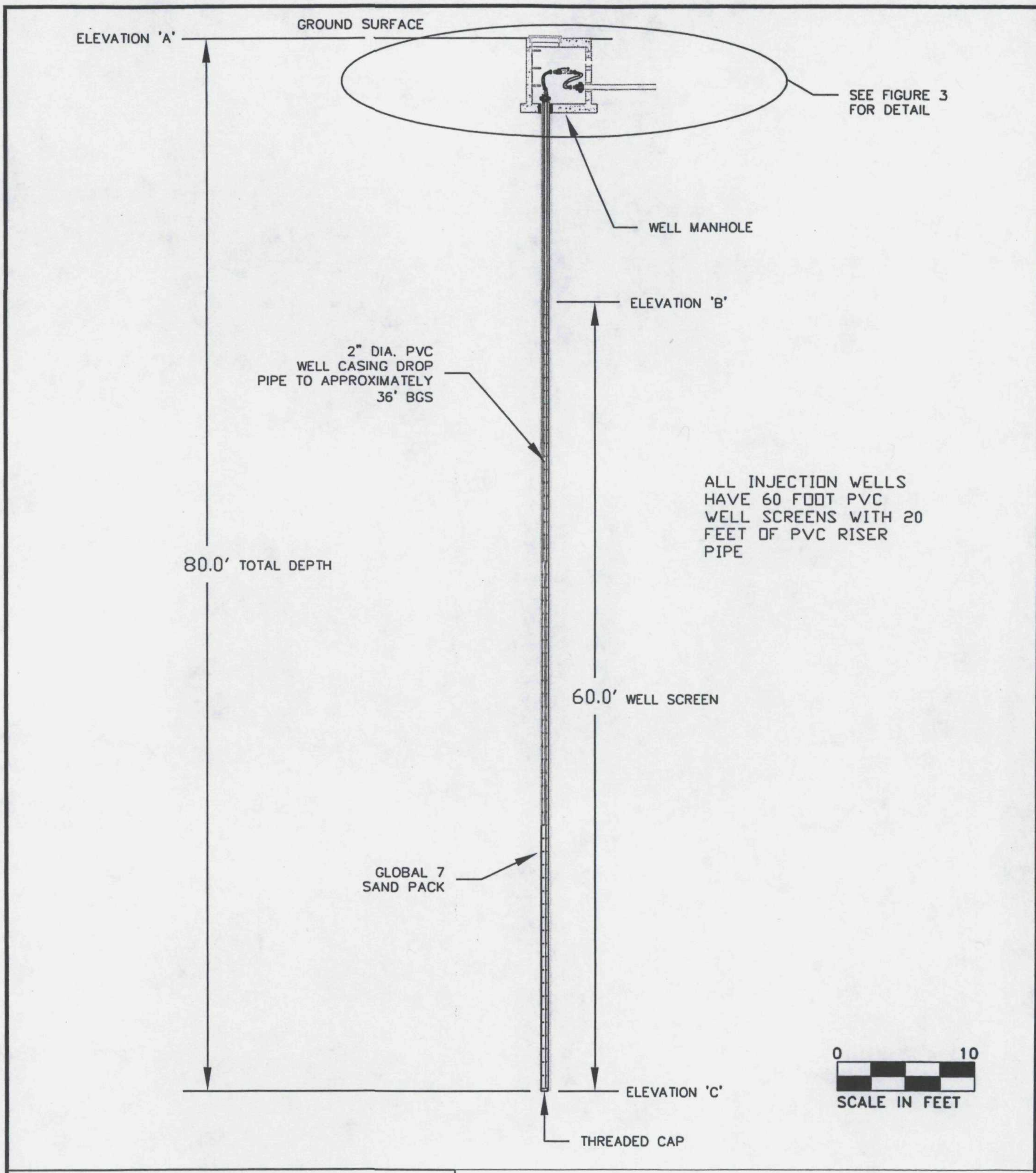


EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

DRAWN BY: JRD	DATE: December 2007
CHECKED BY: RS	PROJECT NUMBER

FIGURE 1
Groundwater Remediation System Layout

Dayton Thermal Products Site
Dayton, Ohio



EARTH TECH

A tyco ***INTERNATIONAL LTD. COMPANY***

4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

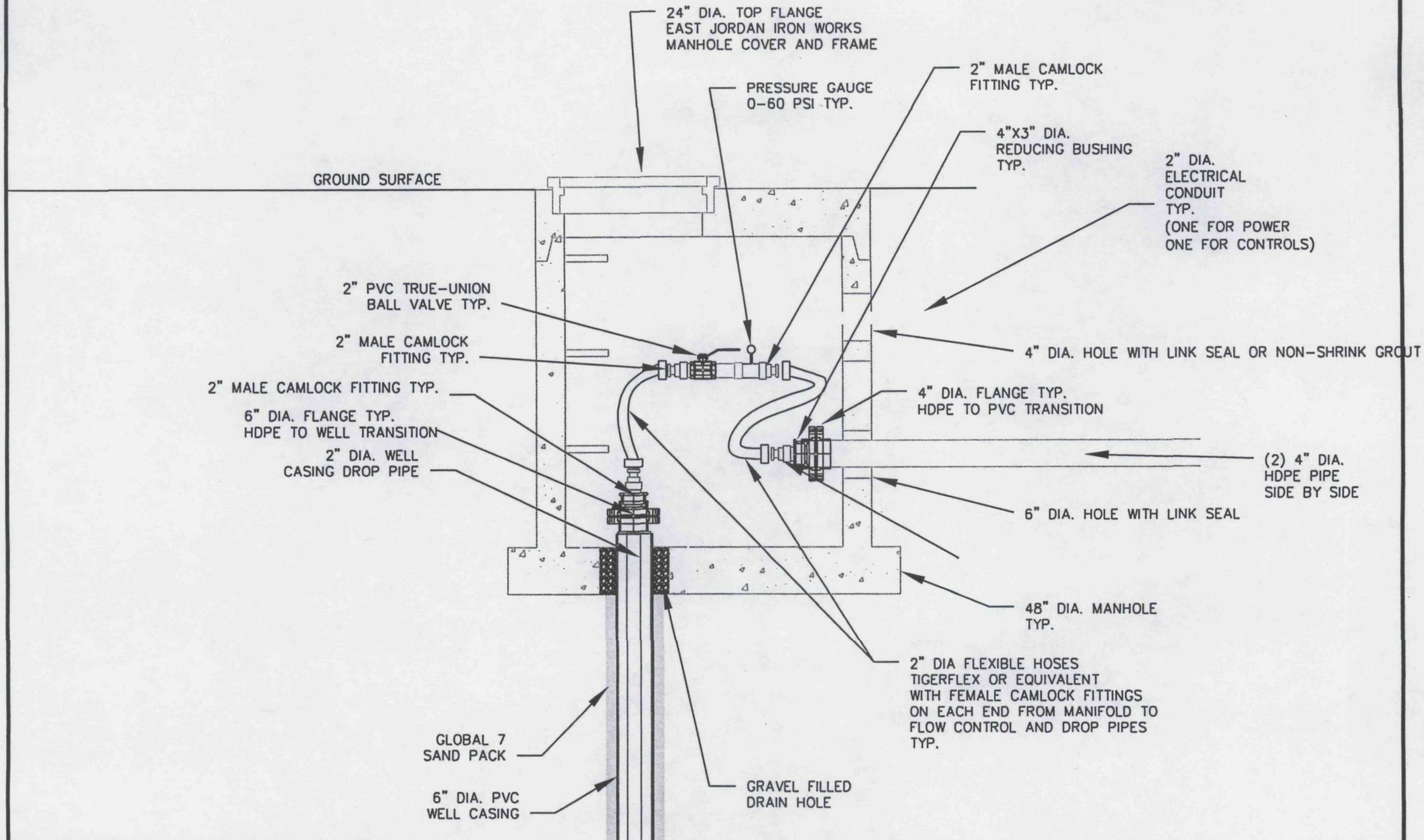
DRAWN BY: JRD	DATE: DEC. 12, 2007
CHECKED BY: JE	EDITED BY: SC
FILE NAME: INJECTION WELL DETAIL	

FIGURE 2

INJECTION WELL CROSS-SECTION

DAYTON THERMAL PRODUCTS SITE

DAYTON, OHIO



EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

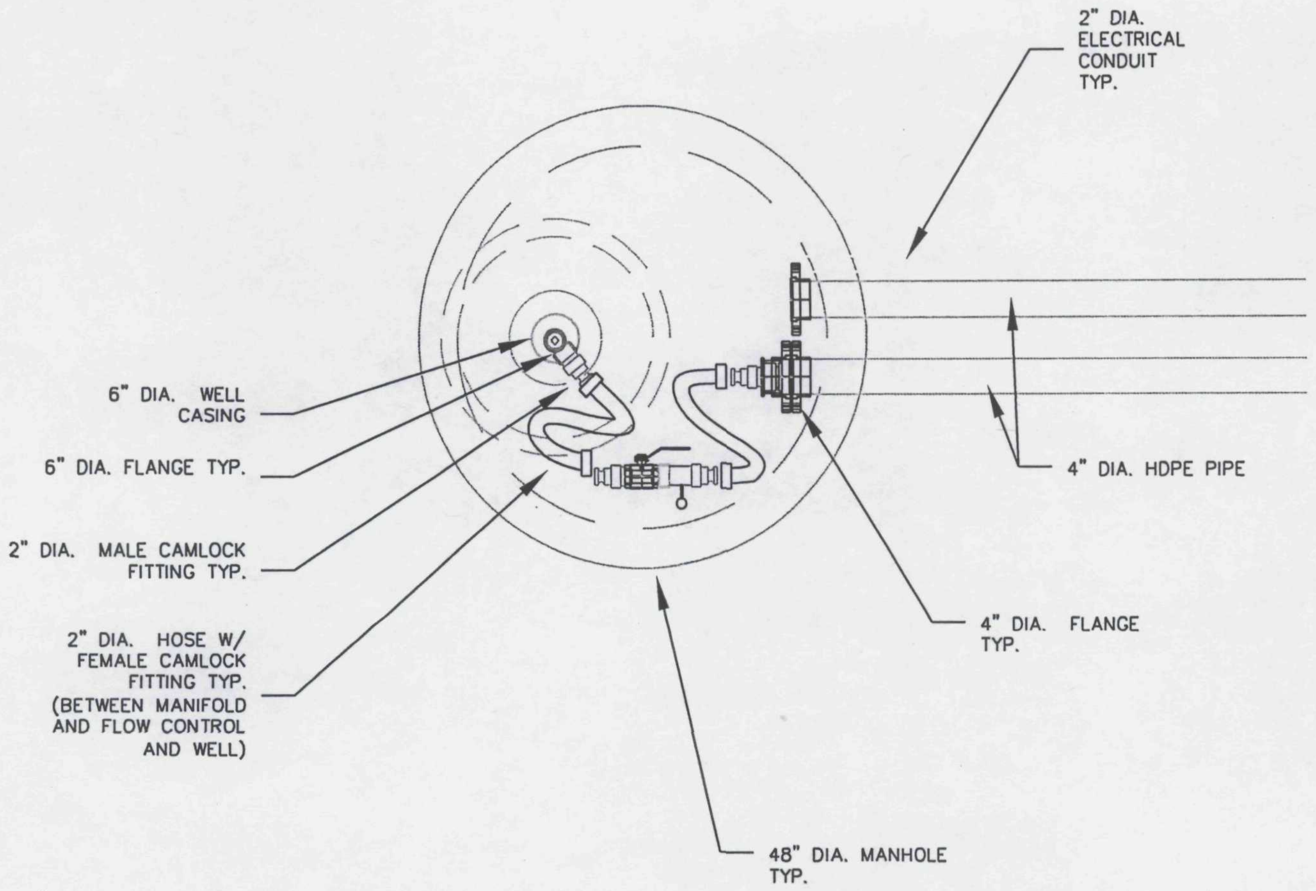
4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: DEC. 12, 2007
CHECKED BY: JE	EDITED BY:SC
FILE NAME:INJECTION WELL DETAIL	

FIGURE 3
TYPICAL INJECTION WELL
PROFILE DETAIL

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

0 2
SCALE IN FEET



EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

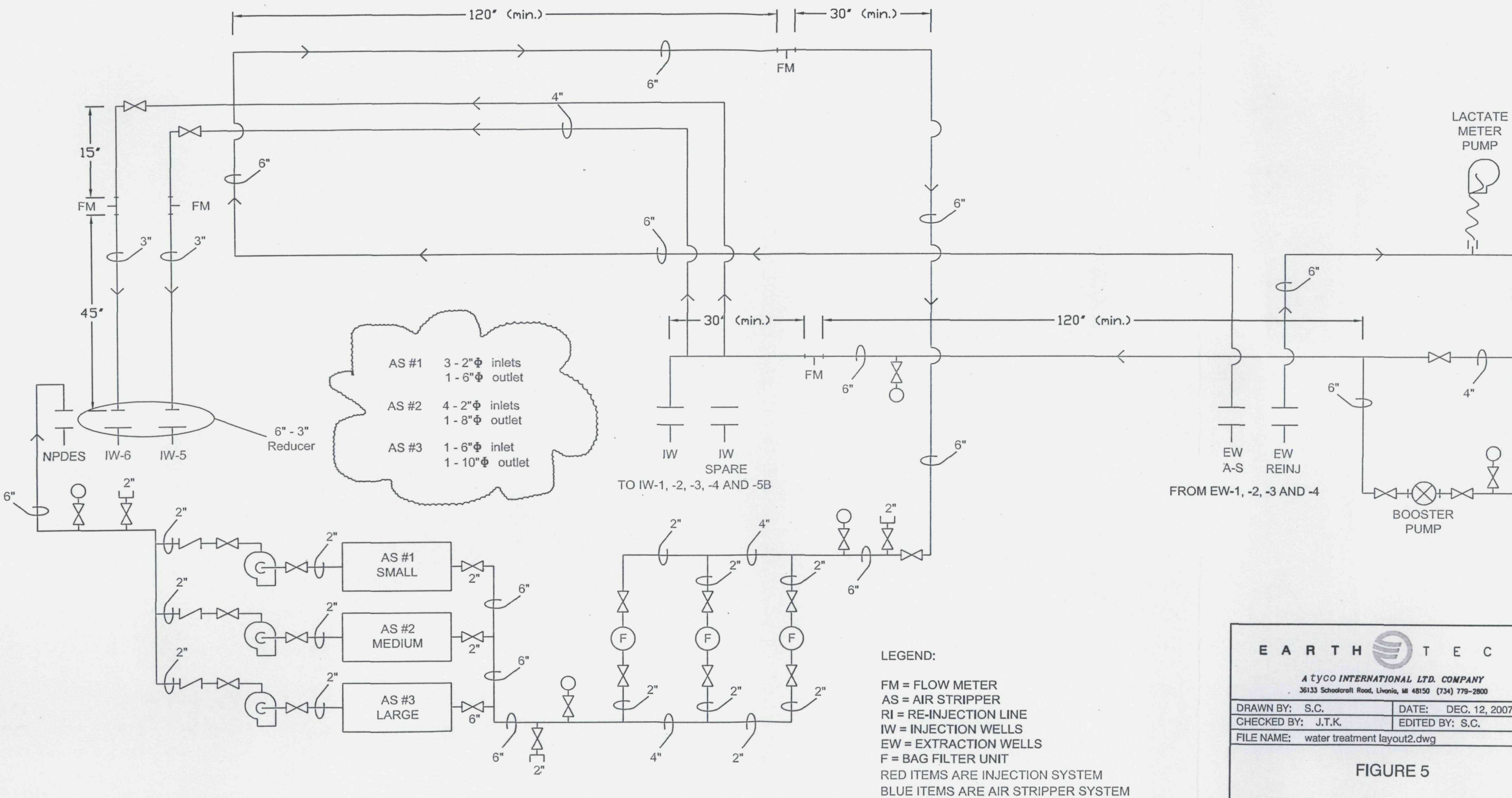
DRAWN BY: JRD	DATE: DEC. 12, 2007
CHECKED BY: JE	EDITED BY: SC
FILE NAME: INJECTION WELL DETAIL	

FIGURE 4

TYPICAL INJECTION WELL
PLAN DETAIL

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

0 2
SCALE IN FEET



LEGEND:

FM = FLOW METER
AS = AIR STRIPPER
RI = RE-INJECTION LINE
IW = INJECTION WELLS
EW = EXTRACTION WELLS
F = BAG FILTER UNIT
RED ITEMS ARE INJECTION SYSTEM
BLUE ITEMS ARE AIR STRIPPER SYSTEM

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
36133 Schoolcraft Road, Livonia, MI 48150 (734) 779-2800

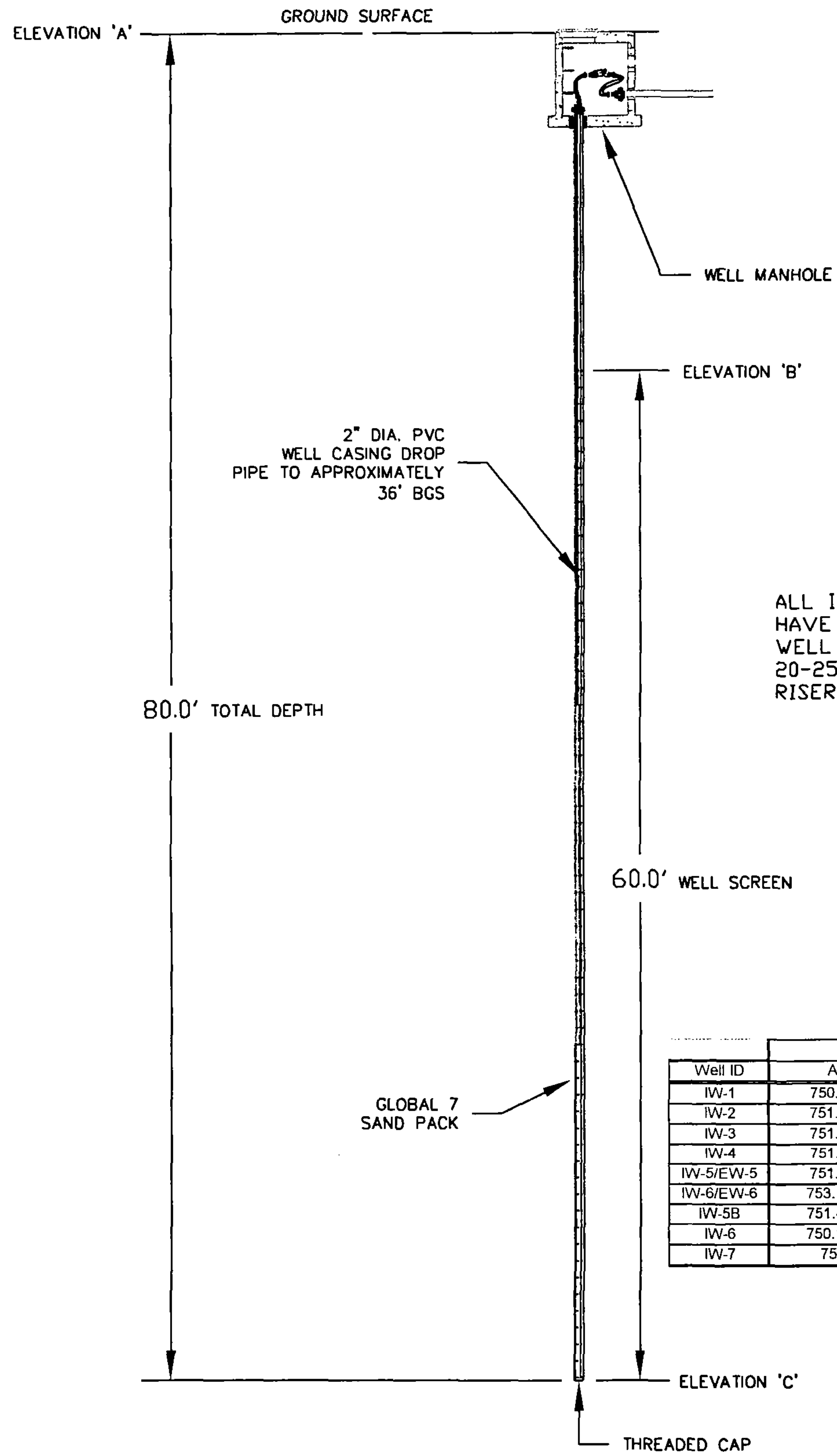
DRAWN BY: S.C.	DATE: DEC. 12, 2007
CHECKED BY: J.T.K.	EDITED BY: S.C.
FILE NAME: water treatment layout2.dwg	

FIGURE 5

WATER TREATMENT SYSTEM LAYOUT

DCX - DAYTON THERMAL PRODUCTS
DAYTON, OHIO

PROJECT NUMBER	63787.70.50	SCALE: NOT TO SCALE



ALL INJECTION WELLS HAVE 60 FOOT PVC WELL SCREENS WITH 20-25 FEET OF PVC RISER PIPE

	Elevation		
Well ID	A	B	C
IW-1	750.99	726.99	666.99
IW-2	751.41	727.41	667.41
IW-3	751.26	726.26	666.26
IW-4	751.27	726.27	666.27
IW-5/EW-5	751.98	727.98	667.98
IW-6/EW-6	753.105	733.105	673.105
IW-5B	751.405	726.405	666.405
IW-6	750.195	725.195	665.195
IW-7	750	725	665

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

4135 Technology Parkway, Sheboygan, WI 53083 (920) 458-8711

DRAWN BY: JRD	DATE: DEC. 12, 2007
CHECKED BY: JE	EDITED BY: SC
FILE NAME: INJECTION WELL DETAIL	

FIGURE 1

INJECTION WELL CROSS-SECTION

DAYTON THERMAL PRODUCTS SITE

DAYTON, OHIO

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970661

WELL LOCATION

County MONTGOMERY Township N/A

DAIMER CHRYSLER CORP.

Owner/Builder (Circle One or Both) THERMAL (First) PRODUCTS (Last)

Address of Well Location 1600 (Number) WEBSTER ST. (Street Name)

City DAYTON Zip Code +4 45404

Permit No. IW-1 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ____ . ____ +/- ____ ft. or m

S ☐ Y ____ . ____ +/- ____ ft. or m

Elevation of Well ____ . ____ +/- ____ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ____

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ____

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ____ Long: ____

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ____ ft. Date ____

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ____

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ____

Test Rate ____ gpm Duration of Test ____ hrs.

Feet of Drawdown ____ ft. Sustainable Yield ____ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ____

PUMP/PITLESS

Type of pump ____ Capacity ____ gpm

Pump set at ____ ft. Pitless Type ____

Pump Installed by ____

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC.

Address 4518 TAYLORSVILLE RD

City, State, Zip DAYTON, OH. 45424

Signed [signature] (TB) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 84 ft.

Casing Diameter 6 in. Length 24 ft. Thickness SCH.40 in.

2☐ Borehole Diameter ____ inches Depth ____ ft.

Casing Diameter ____ in. Length ____ ft. Thickness ____ in.

Casing Height Above Ground MANHOLE ft.

Type: Steel 1 ☐ 2 ☐; Galv. 1 ☐ 2 ☐; PVC 1 ☑ 2 ☐; Other 1 ☐ 2 ☐ ____

Joints: Threaded 1 ☑ 2 ☐; Welded 1 ☐ 2 ☐; Solvent 1 ☐ 2 ☐; Other 1 ☐ 2 ☐ ____

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 84 ft. and 24 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 26.5CF/2650#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 84 ft. TO 22 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 4.0CF/400#

Method of Installation POURED

Depth: Placed FROM 22 ft. TO 15 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR SAND & GRAVEL	8	84
BOFB 84.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10/25/03 Total Depth of Well 84 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970658

WELL LOCATION

County MONTGOMERY Township N/A

Owner/Builder (Circle One or Both) DAIMER CHRYSLER CORP. THERMAL PRODUCTS (First / Last)

Address of Well Location 1600 (Number) WEBSTER ST. (Street Name)

City DAYTON Zip Code +4 45404

Permit No. TW-2 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ______ . ______ +/- ______ ft. or m

S ☐ Y ______ . ______ +/- ______ ft. or m

Elevation of Well ______ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ______

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ______

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ______ Long: ______

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ______

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ______

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ______

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ______

PUMP/PITLESS

Type of pump ______ Capacity ______ gpm

Pump set at ______ ft. Pitless Type ______

Pump installed by ______

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC

Address 4518 TAYLORSVILLE RD

City, State, Zip DAYTON, OH. 45424

Signed [signature] Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 84 ft.

Casing Diameter 6 in. Length 24 ft. Thickness SCH. 40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.

Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground MANHOLE ft.

Type: 1☐ 2☐ Steel; 1☐ 2☐ Galv.; 1☑ 2☐ PVC; 1☐ 2☐ Other ______

Joints: 1☑ 2☐ Threaded; 1☐ 2☐ Welded; 1☐ 2☐ Solvent; 1☐ 2☐ Other ______

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 84 ft. and 24 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 22CF/2200#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 84 ft. TO 22 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 3.5CF/350#

Method of Installation POURED

Depth: Placed FROM 22 ft. TO 11 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR. SAND & GRAVEL	8	84
BOFB 84.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10/22/03 Total Depth of Well 84 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970657

WELL LOCATION

County MONTGOMERY Township N/A

Owner/Builder (Circle One or Both) DAIMLER-CHRYSLER CORP. THERMAL PRODUCTS (First / Last)

Address of Well Location 1600 (Number) WEBSTER ST. (Street Name)

City DAYTON Zip Code +4 45404

Permit No. IW-3 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ______ . ______ +/- ______ ft. or m

S ☐ Y ______ . ______ +/- ______ ft. or m

Elevation of Well ______ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ______

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ______

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ______ Long: ______

North

West

S/A

East

South

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ______

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ______

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ______

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ______

PUMP/PITLESS

Type of pump ______ Capacity ______ gpm

Pump set at ______ ft. Pitless Type ______

Pump installed by ______

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC.

Address 4518 TAYLORSVILLE RD

City, State, Zip DAYTON, OH. 45424

Signed [signature] (T3) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 85 ft.

Casing Diameter 6 in. Length 25 ft. Thickness SCH. 40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.

Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground MANHOLE ft.

Type: 1☐ 2☐ Steel; 1☐ 2☐ Galv.; 1☑ 2☐ PVC; 1☐ 2☐ Other ______

Joints: 1☑ 2☐ Threaded; 1☐ 2☐ Welded; 1☐ 2☐ Solvent; 1☐ 2☐ Other ______

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 85 ft. and 25 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 25.5 CF/2550#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 85 ft. TO 23 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 2.5 CF/250#

Method of Installation POURED

Depth: Placed FROM 23 ft. TO 10 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR. SAND & GRAVEL	8	85
BOEB 85.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10-17-03 Total Depth of Well 85 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970662

WELL LOCATION

County MONTGOMERY Township N/A

Owner/Builder (Circle One or Both) DAIMLER CHRYSLER CORP. THERMAL PRODUCTS (First / Last)

Address of Well Location 1600 (Number) WEBSTER ST. (Street Name)

City DAYTON Zip Code +4 45404

Permit No. IW-4 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ______ . ______ +/- ______ ft. or m

S ☐ Y ______ . ______ +/- ______ ft. or m

Elevation of Well ______ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ______

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ______

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ______ Long: ______

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ______

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ______

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ______

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ______

PUMP/PITLESS

Type of pump ______ Capacity ______ gpm

Pump set at ______ ft. Pitless Type ______

Pump installed by ______

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC.

Address 4518 TAYLORSVILLE RD.

City, State, Zip DAYTON, OH. 45424

Signed Jim N[illegible] (TB) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 85 ft.
Casing Diameter 6 in. Length 25 ft. Thickness SCH. 40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.
Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground MANHOLE ft.

Type: Steel 1☐ 2☐; Galv. 1☐ 2☐; PVC 1☑ 2☐; 1☐ 2☐ Other ______

Joints: Threaded 1☑ 2☐; Welded 1☐ 2☐; Solvent 1☐ 2☐; 1☐ 2☐ Other ______

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 85 ft. and 25 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 22 CF/2200#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 85 ft. TO 23 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 2.0 CF/200#

Method of Installation POURED

Depth: Placed FROM 23 ft. TO 11 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR SAND & GRAVEL	8.0	85
BOEB 85.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10/26/03 Total Depth of Well 85 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970660

WELL LOCATION

County MONTGOMERY Township N/A

DAIMER CHRYLER CORP.

Owner/Builder (Circle One or Both) THERMAL PRODUCTS
First Last

Address of Well Location 1600 WEBSTER ST.
Number Street Name

City DAYTON Zip Code +4 45404

Permit No. EW-5 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well EXTRACTION

N ☐ X ______ . ______ +/- ______ ft. or m

S ☐ Y ______ . ______ +/- ______ ft. or m

Elevation of Well ______ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ______

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ______

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ______ Long: ______

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ______

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ______

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ______

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ______

PUMP/PITLESS

Type of pump ______ Capacity ______ gpm

Pump set at ______ ft. Pitless Type ______

Pump installed by ______

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC.

Address 4518 TAYLORSVILLE RD.

City, State, Zip DAYTON, OH. 45424

Signed Jim Nitzsche (PB) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 84 ft.

Casing Diameter 6 in. Length 24 ft. Thickness SCH 40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.

Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground MANHOLE ft.

Type: Steel 1 ☐ 2 ☐; Galv. 1 ☐ 2 ☐; PVC 1 ☑ 2 ☐; Other 1 ☐ 2 ☐ ______

Joints: Threaded 1 ☑ 2 ☐; Welded 1 ☐ 2 ☐; Solvent 1 ☐ 2 ☐; Other 1 ☐ 2 ☐ ______

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 84 ft. and 24 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 22 CF/2200#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 84 ft. TO 22 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 2.0 CF/200#

Method of Installation POURED

Depth: Placed FROM 22 ft. TO 11 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR SAND & GRAVEL	8	84
BOFB 84.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10-24-03 Total Depth of Well 84 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

964821

WELL LOCATION

County MONTGOMERY Township

Owner/Builder (Circle One or Both) DAIMLER CHRYSLER CORP. First Last

Address of Well Location 1600 (Number) WEBSTER ST. (Street Name)

City DAYTON Zip Code +4 45404

Permit No. EW-6 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well RECOVERY

N ☐ X ______ . ______ +/- ______ ft. or m

S ☐ Y ______ . ______ +/- ______ ft. or m

Elevation of Well ______ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ______ Long: ______

North

West S/A East

South

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☒ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☒ Borehole Diameter 11 inches Depth 80 ft.
Casing Diameter 6 in. Length 20 ft. Thickness SCH. 40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.
Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground 0.0 ft.

Type: 1☐ 2☐ Steel; 1☐ 2☐ Galv.; 1☒ 2☐ PVC; 1☐ 2☐ Other

Joints: 1☒ 2☐ Threaded; 1☐ 2☐ Welded; 1☐ 2☐ Solvent; 1☐ 2☐ Other

SCREEN

Diameter 6" Slot Size .020 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 80 ft. and 20 ft.

GRAVEL PACK (Filter Pack)

Material/Size #3 SILICA Volume/Weight Used 20cf/2000#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 80 ft. TO 18 ft.

GROUT

Material BENTONITE CHIPS Volume/Weight Used 10cf/1000#

Method of Installation POURED

Depth: Placed FROM 18 ft. TO 0.0 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
BR SANDY CLAY w/ SILT + GRAVEL	0.0	1.5
BR SAND + GRAVEL TR COBBLES	1.5	9
BR Silty SAND w/ GRAVEL + CLAY	9	12
BR SAND + GRAVEL TR COBBLES	12	16
BR Silty GRAVELLY SAND w/ CLAY	16	23
BR SAND + GRAVEL w/ COBBLES	23	80
(WET AT 26)		
BOFB 80.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 7/3/03 Total Depth of Well 80 ft.

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ______

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other

☐ Air ☐ Bailing ☐ Pumping* ☐ Other

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality

PUMP/PITLESS

Type of pump ______ Capacity ______ gpm

Pump set at ______ ft. Pitless Type

Pump installed by

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC.

Address 4518 TAYLORSVILLE RD.

City, State, Zip DAYTON, OH. 45424

Signed [signature] (TS) Date 7/14/03

ODH Registration Number

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970656

WELL LOCATION

County MONTGOMERY Township N/A

Owner/Builder (Circle One or Both) DAIMER CHRYSLER CORP THERMAL PRODUCTS
First Last

Address of Well Location 1600 WEBSTER ST.
Number Street Name

City DAYTON Zip Code +4 45404

Permit No. IW-5 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ____ . ____ +/- ____ ft. or m

S ☐ Y ____ . ____ +/- ____ ft. or m

Elevation of Well ____ . ____ +/- ____ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ____

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ____

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ____ Long: ____

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ____ ft. Date ____

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ____

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ____

Test Rate ____ gpm Duration of Test ____ hrs.

Feet of Drawdown ____ ft. Sustainable Yield ____ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ____

PUMP/PITLESS

Type of pump ____ Capacity ____ gpm

Pump set at ____ ft. Pitless Type ____

Pump installed by ____

* I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER - MORNER INC.

Address 4518 TAYLORSVILLE RD

City, State, Zip DAYTON, OH. 45424

Signed [signature] (TB) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 85 ft.

Casing Diameter 6 in. Length 25 ft. Thickness SCH 40 in.

2☐ Borehole Diameter ____ inches Depth ____ ft.

Casing Diameter ____ in. Length ____ ft. Thickness ____ in.

Casing Height Above Ground MANHOLE ft.

Type: 1☐ 2☐ Steel; 1☐ 2☐ Galv.; 1☑ 2☐ PVC; 1☐ 2☐ Other ____

Joints: 1☑ 2☐ Threaded; 1☐ 2☐ Welded; 1☐ 2☐ Solvent; 1☐ 2☐ Other ____

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 85 ft. and 25 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 25CF/2500

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 85 ft. TO 23 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 4.0CF/400#

Method of Installation POURED

Depth: Placed FROM 23 ft. TO 12 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR. SAND + GRAVEL	8	85
BOFB 85.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10-13-03 Total Depth of Well 85 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970655

WELL LOCATION

County MONTGOMERY Township N/A

Owner/Builder (Circle One or Both) DAIMER CHRYSLER CORP. THERMAL PRODUCTS (First / Last)

Address of Well Location 1600 (Number) WEBSTER ST. (Street Name)

City DAYTON Zip Code +4 45404

Permit No. IW-6 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ______ . ______ +/- ______ ft. or m

S ☐ Y ______ . ______ +/- ______ ft. or m

Elevation of Well ______ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ______

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ______

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ______ Long: ______

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ______

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ______

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ______

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ______

PUMP/PITLESS

Type of pump ______ Capacity ______ gpm

Pump set at ______ ft. Pitless Type ______

Pump installed by ______

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER-MORNER INC.

Address 4518 TAYLORSVILLE RD.

City, State, Zip DAYTON OH. 45424

Signed [signature] (TJ) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☑ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☑ Borehole Diameter 11 inches Depth 85 ft.

Casing Diameter 6 in. Length 25 ft. Thickness SCH.40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.

Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground MANHOLE ft.

Type: 1☐ 2☐ Steel; 1☐ 2☐ Galv.; 1☑ 2☐ PVC; 1☐ 2☐ Other ______

Joints: 1☑ 2☐ Threaded; 1☐ 2☐ Welded; 1☐ 2☐ Solvent; 1☐ 2☐ Other ______

SCREEN

Diameter 6" Slot Size .30 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 85 ft. and 25 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 22CF/2200#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 85 ft. TO 23 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 2.5CF/250#

Method of Installation POURED

Depth: Placed FROM 23 ft. TO 12 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR. SAND & GRAVEL	8	85
BOFB 85.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10-16-03 Total Depth of Well 85 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

DNR 7802.96

TYPE OR USE PEN
SELF TRANSCRIBING
PRESS HARD

WELL LOG AND DRILLING REPORT

Ohio Department of Natural Resources
Divison of Water, 1939 Fountain Square Drive
Columbus, Ohio 43224-9971 Voice (614) 265-6739 Fax (614) 447-9503

970654

WELL LOCATION

County MONTGOMERY Township N/A

Owner/Builder (Circle One or Both) DAIMLER CHRYSLER CORP THERMAL PRODUCTS (First / Last)

Address of Well Location 1600 WEBSTER ST. (Number / Street Name)

City DAYTON Zip Code +4 45404

Permit No. IW-7 Section/Lot No. (Circle One or Both) 5

Location of Well in State Plane coordinates, if available: Use of Well INJECTION

N ☐ X ________ . ______ +/- ______ ft. or m

S ☐ Y ________ . ______ +/- ______ ft. or m

Elevation of Well ________ . ______ +/- ______ ft. or m

Datum Plain: ☐ NAD27 ☐ NAD83 Elevation Source ________

Source of Coordinates: ☐ GPS ☐ Survey ☐ Other ________

Sketch a map showing distance well lies from numbered state highways, street intersections, county roads, buildings or other notable landmarks. If latitude and longitude are available please include here: Lat: ________ Long: ________

North

West S/A East

South

WELL TEST*

Pre-Pumping Static Level ______ ft. Date ________

Measured from: ☐ Top of Casing ☐ Ground Level ☐ Other ________

☐ Air ☐ Bailing ☐ Pumping* ☐ Other ________

Test Rate ______ gpm Duration of Test ______ hrs.

Feet of Drawdown ______ ft. Sustainable Yield ______ gpm

*(Attach a copy of the pumping test record, per section 1521.05, ORC)

Is Copy Attached? ☐ Yes ☐ No Flowing Well? ☐ Yes ☐ No

Quality ________

PUMP/PITLESS

Type of pump ________ Capacity ______ gpm

Pump set at ______ ft. Pitless Type ________

Pump installed by ________

I hereby certify the information given is accurate and correct to the best of my knowledge.

Drilling Firm BOWSER MORNER INC.

Address 4518 TAYLORSVILLE RD.

City, State, Zip DAYTON, OH. 45424

Signed [signature] (T3) Date 12/2/03

ODH Registration Number 1631

CONSTRUCTION DETAILS

☐ Rotary ☐ Cable ☐ Augered ☐ Driven ☒ Other SONIC

BOREHOLE/CASING (measured from ground surface)

1☒ Borehole Diameter 11 inches Depth 85 ft.

Casing Diameter 6 in. Length 25 ft. Thickness SCH 40 in.

2☐ Borehole Diameter ______ inches Depth ______ ft.

Casing Diameter ______ in. Length ______ ft. Thickness ______ in.

Casing Height Above Ground MANHOLE ft.

Type: 1☐ 2☐ Steel; 1☐ 2☐ Galv.; 1☒ 2☐ PVC; 1☐ 2☐ Other ________

Joints: 1☒ 2☐ Threaded; 1☐ 2☐ Welded; 1☐ 2☐ Solvent; 1☐ 2☐ Other ________

SCREEN

Diameter 6" Slot Size .030 Screen Length 60 ft.

Type SLOTTED Material PVC

Set Between 85 ft. and 25 ft.

GRAVEL PACK (Filter Pack)

Material/Size SILICA #3 Volume/Weight Used 22.5 CF/2250#

Method of Installation TREMIE THROUGH CASING

Depth: Placed FROM 85 ft. TO 23 ft.

GROUT

Material BENT. CHIPS Volume/Weight Used 2.5 CF/250#

Method of Installation POURED

Depth: Placed FROM 23 ft. TO 11 ft.

DRILLING LOG*

INDICATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. Show color, texture, hardness, and formation: sandstone, shale, limestone, gravel, clay, sand, etc.	From	To
MANHOLE VAULT	0.0	8.0
BR SAND & GRAVEL	8	85
BOFB 85.0		

*(If more space is needed to complete drilling log, use next consecutively numbered form.)

Date of Well Completion 10-15-03 Total Depth of Well 85 ft.

Completion of this form is required by section 1521.05, Ohio Revised Code - file within 30 days after completion of drilling.

ORIGINAL COPY TO - ODNR, DIVISION OF WATER, 1939 FOUNTAIN SQ. DRIVE, COLS., OHIO 43224-9971

Blue - Customer's copy Pink - Driller's copy Green - Local Health Dept. copy

ATTACHMENT D
Historical Monthly Re-Injection Analytical Data
Dayton Thermal Products Site
Dayton, Ohio
December 2007

	Analytical Parameter							
	1,1,1-Trichlorethane	1,1-Dicloroethene	1,2-Dichloroethane	Carbon Tetrachloride	Cis-1,2-Dichlorethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Limits in Previous Permit-to-Operate	**710**	**126**	**114**	**114**	**1050**	**1913**	**5381**	**114**
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	**ug/l**
Monitoring Date:								
January 2006	0.8 J	1 J	<1.0	<1.0	110	130	860	21
February 2006	< 0.8	< 0.8	< 1	< 1	25	130	360	2 J
March 2006	< 0.8	< 0.8	< 1	< 1	27	130	340	2 J
April 2006	< 0.8	< 0.8	< 1	< 1	32	140	350	3 J
May 2006	<0.8	<0.8	<1	<1	23	170	310	2 J
June 2006	NS	NS	NS	NS	NS	NS	NS	NS
July 2006	NS	NS	NS	NS	NS	NS	NS	NS
August 2006	NS	NS	NS	NS	NS	NS	NS	NS
September 2006	NS	NS	NS	NS	NS	NS	NS	NS
October 2006	NS	NS	NS	NS	NS	NS	NS	NS
November 2006	<0.8	<0.8	<1	<1	19	200	290	2 J
December 2006	<0.8	<0.8	<1	<1	19	230	300	3J
January 2007	<0.8	<0.8	<1	<1	20	250	310	3J
February 2007	NS	NS	NS	NS	NS	NS	NS	NS
March 2007	<0.8	<0.8	<1	<1	21	200	300	4J
April 2007	<0.8	1J	<1.0	<1.0	63	240	460	12
May 2007	<0.8	2 J	<1.0	<1.0	95	240	630	22
June 2007	<0.8	1J	<1.0	<1.0	76	280	620	15
July 2007	<0.8	1J	<1.0	<1.0	44	260	460	5
August 2007	<0.8	<0.8	<1.0	<1.0	29	280	260	5 J
September 2007	210	50	<1.0	<1.0	180	81	810	9
October 2007	220	52	<1.0	<1.0	130	67	700	7
November 2007	240	58	<1.0	<1.0	130	76	750	6
AVERAGE	223	53	<1.0	<1.0	61	183	477	12
MAXIMUM	**240**	**58**	**<1.0**	**<1.0**	**180**	**280**	**860**	**22**

Notes: The volatile organic compounds reported above were analyzed by USEPA Method 8260.
<0.8 : None detected with method detection limit.
ug/L: Micrograms per liter.
J : Estimated Value.
NS: No sample collected due to inoperation of injection system.

Material Safety Data Sheet

Sodium Lactate, 60% **24 Hour Emergency Phone: CHEMTREC 1-800-424-9300**

Date of Preparation: 9/17/02 Revision: 9/17/02

Section 1 - Chemical Product and Company Identification

Synonyms: Lacolin; Lactic Acid, monosodium Salt; Propanioc acid, 2-hydroxy-, monosodium salt
CAS No: 72-17-3
Molecular Weight: 112.07
Chemical Formula: C3H5O3Na
Distributed by:
Hawkins, Inc. 3100 E. Hennepin Avenue Minneapolis, MN 55413 (612-331-6910)

Section 2 - Composition / Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Lactate	72-17-3	60%	Yes

Section 3 - Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE EYE IRRITATION.

Potential Health Effects

To the best of our knowledge, the toxicological properties of this material have not been thoroughly investigated.

Inhalation: No adverse health effects expected from inhalation.

Ingestion: Not expected to be a health hazard via ingestion.

Skin Contact: Not expected to be a health hazard from skin exposure.

Eye Contact: May cause mild irritation, possible reddening.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

Section 4 - First Aid Measures

Inhalation:
Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:
Not expected to require first aid measures. If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact:
Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Section 5 - Fire-Fighting Measures

NFPA Ratings:
Health: 1 Flammability: 0 Reactivity: 0

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6 - Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

Section 7 - Handling and Storage

Keep in a tightly closed container, stored in a cool (> 65°F), dry, ventilated area. Protect against physical damage. Avoid long storage times. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Section 8 - Exposure Controls / Personal Protection

Airborne Exposure Limits: None established.

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved):
For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9 - Physical and Chemical Properties

Appearance:
Colorless to yellow liquid.

Odor:
Odorless.

Solubility:
Complete (100%)

Specific Gravity:
1.31

pH:
6.5 - 8.5

% Volatiles by volume @ 21C (70F):
No information found.

Boiling Point:
110C (230F)

Melting Point:
17C (63F)

Vapor Density (Air=1):
0.7

Vapor Pressure (mm Hg):
14 @ 20C (68F)

Evaporation Rate (BuAc=1):
No information found.

Section 10 - Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities: No information found.

Conditions to Avoid: None.

Section 11- Toxicological Information

Oral rat LD50: 2000 mg/Kg. Irritation Data for Sodium Lactate: (Std Draize, rabbit, eye): 100 mg - mild.

--------\Cancer Lists\--------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Sodium Lactate (72-17-3)	No	No	None

Section 12 - Ecological Information

Environmental Fate:
Mobility: Completely soluble.
Persistence / degradability: Product is a salt of lactic acid, which is readily biodegradable.
Bioaccumulation: Unlikely.
Ecotoxicity: Ecological injuries are not known or expected under normal use; (No effect on Daphnia @ 10g/L).

Environmental Toxicity: No information found.

Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14 - Transport Information

Not regulated.

Section 15 - Regulatory Information

--------\Chemical Inventory Status - Part 1\---------------------------------

Ingredient	TSCA	EC	Japan	Australia
Sodium Lactate (72-17-3)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\---------------------------------

Ingredient	Korea	--Canada-- DSL	--Canada-- NDSL	Phil.
Sodium Lactate (72-17-3)	Yes	Yes	No	Yes

-------\Federal, State & International Regulations - Part 1\----------------

Ingredient	-SARA 302- RQ	-SARA 302- TPQ	------SARA 313------ List	------SARA 313------ Chemical Catg.
Sodium Lactate (72-17-3)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\---------------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Sodium Lactate (72-17-3)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Mixture / Liquid)

Section 16 - Other Information

Prepared By: Chris W. Gibson
Revision Notes: New Product
Disclaimer:
Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information.

The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, express or implied, is made regarding performance, stability, or otherwise. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, and storage. Other factors may require additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, the handling and use remains the responsibility of the customer. No suggestions are intended as, and should not be construed as, a recommendation to infringe on any existing patents or to violate any Federal, State, or local laws.

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Justin Kelly
EARTH TECH
35133 Schoolcraft Road
Livonia, MI 48150

03/13/2003

Job No.: 03.04851
Sample No.: 828154

Dayton Thermal 63393
Dayton Thermal 63393

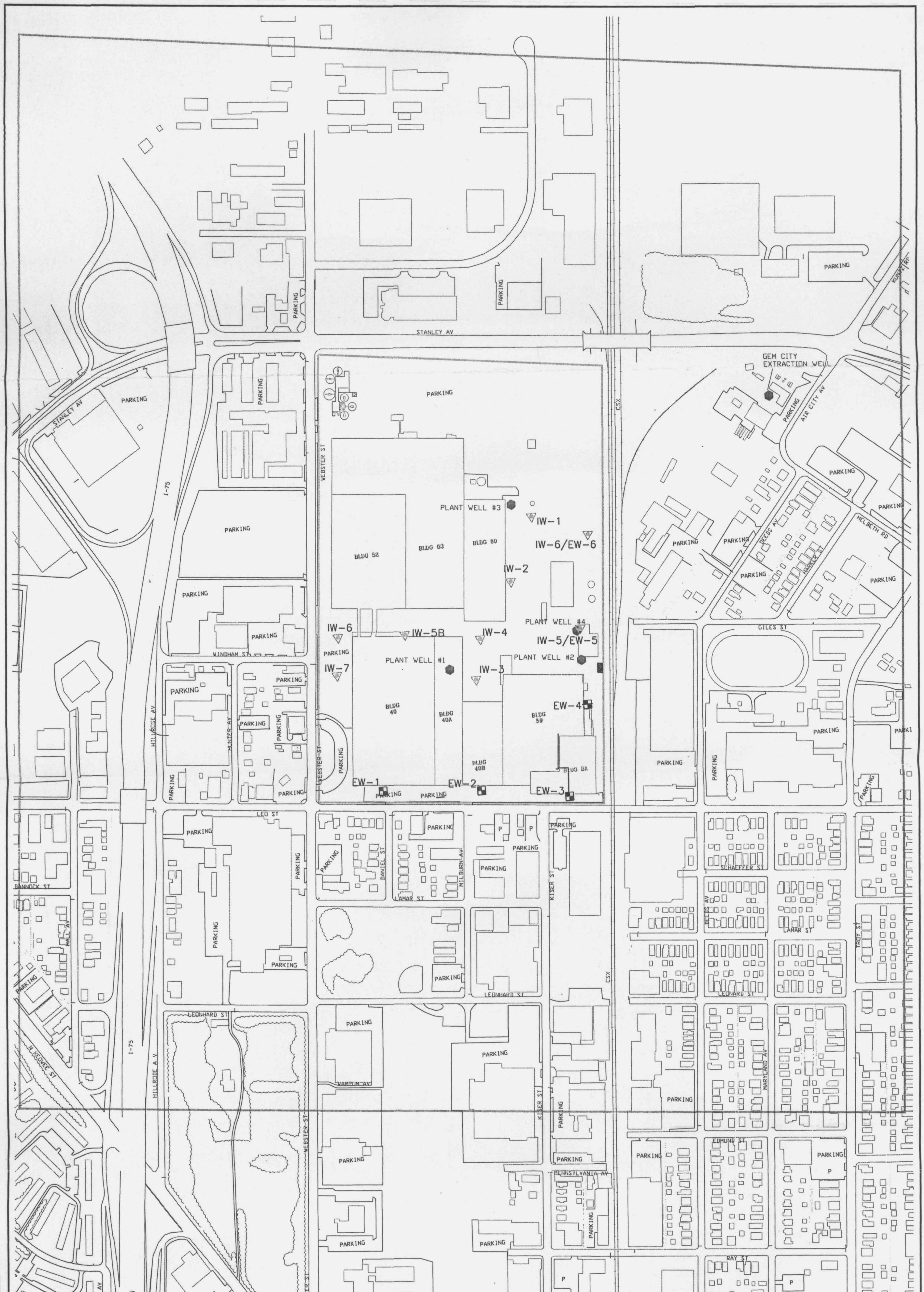
Sample Description: S.New Shallow

Date Taken: 03/10/2003 Time Taken: 19:00 Date Received: 03/11/2003

Parameter	Result	Unit	Date Prepared	Date Analyzed	Lab Tech.	Methodology	Note
Alkalinity, Bicarb.(CaCO3)	454	mg/L		03/12/2003	dgr	SM 2320B	
Alkalinity, Carb. (CaCO3)	<10	mg/L		03/12/2003	dgr	SM 2320B	
Chloride	252	mg/L		03/11/2003	dgr	EPA 325.3	
Fluoride	0.17	mg/L		03/12/2003	gcw	SM 4500-F C.	
Nitrogen, Nitrate+Nitrite	2.54	mg/L		03/11/2003	gcw	SM 4500-NO3 F.	
Solids, Suspended	7,640	mg/L		03/12/2003	mss	EPA 160.2	
Sulfate	88	mg/L		03/12/2003	jmg	EPA 375.4	
Barium, ICP	1.08	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Boron, ICP	0.919	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Cadmium, ICP	<0.030	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Calcium, ICP	1,290	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Iron, ICP	172	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Magnesium, ICP	448	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Manganese, ICP	6.17	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
~~Potassium, ICP~~	*	~~mg/L~~	~~03/12/2003~~			~~EPA 200.7~~	
Sodium, ICP	133	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	
Strontium, ICP	1.45	mg/L	03/12/2003	03/13/2003	emd	EPA 200.7	

* data available 3/14 Am

PRELIMINARY REPORT



LEGEND

— PROPERTY LINE

— $\frac{1}{4}$ MILE OFFSET FROM PROPERTY LINE

▽ - INJECTION WELL

◪ - EXTRACTION WELLS

⬢ - EXISTING EXTRACTION WELLS

NORTH

0' 400'

SCALE

SOURCE: LBG DRAWING 3CHDA141, 3CHDA14K AND STANLEY & 75

EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY

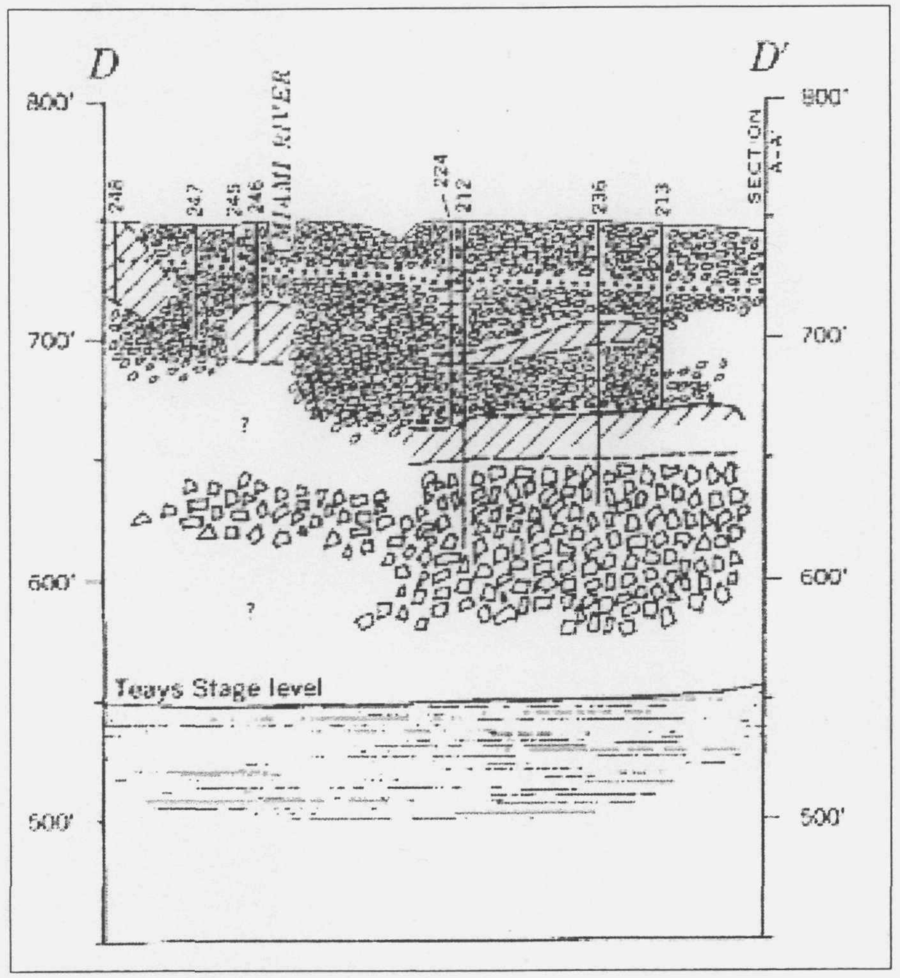
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

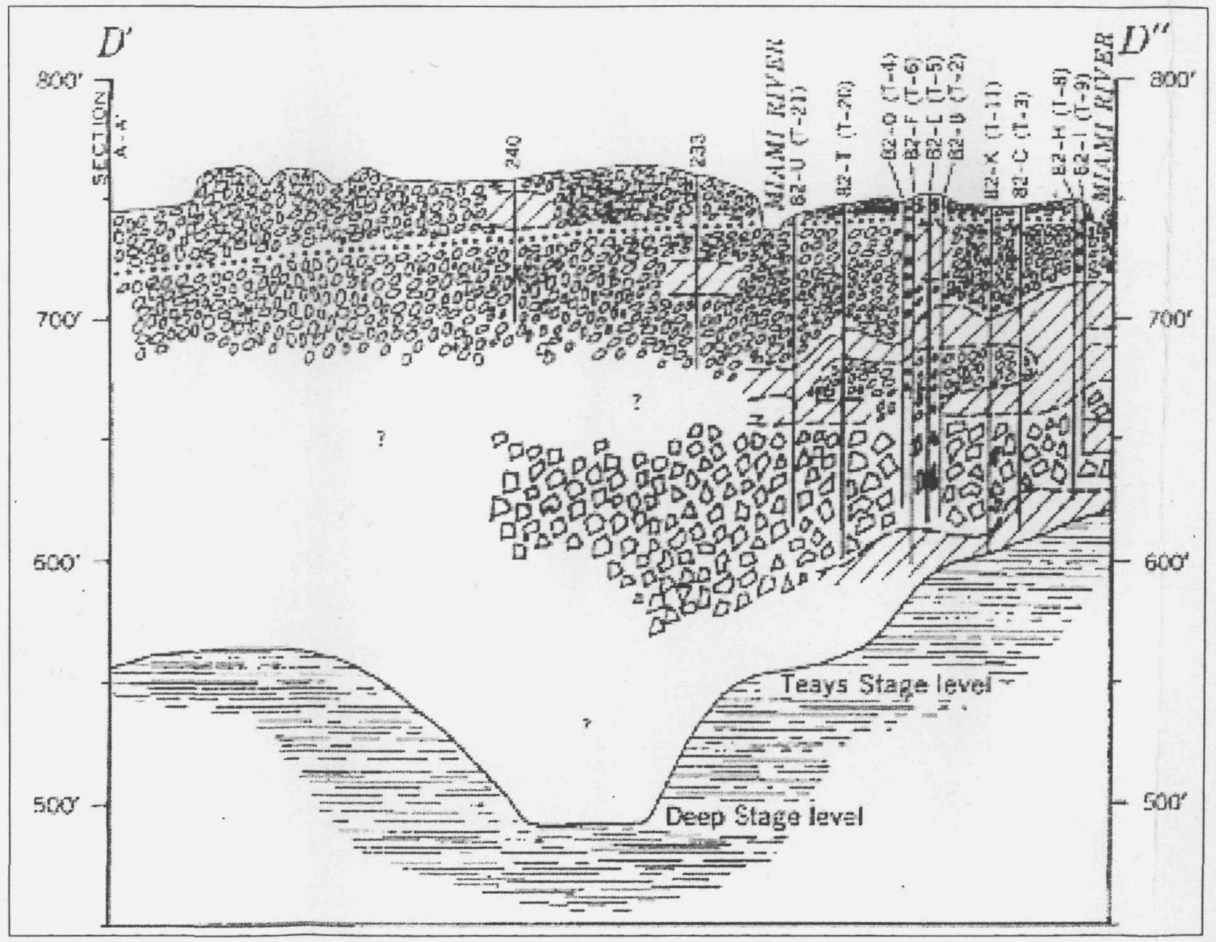
QUARTER MILE LOCATOR MAP

DAYTON THERMAL PRODUCTS SITE

DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: SC	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: DEC. 12, 2007	SCALE: ------	CROSS SECTION LOCATOR





EXPLANATION

Upper aquifer
Sand and gravel deposits occurring at or near the surface; generally overlies the till-rich zone

Till-rich zone
Fairly widespread sheets, lenses, and masses of till; contains pockets and lenses of sand and gravel; occurs as a layer of low permeability and generally separates the sand and gravel deposits into an upper and a lower aquifer

Lower aquifer
Sand and gravel deposits generally occurring between the till-rich zone and bedrock; contains interbedded lenses and masses of till and clay, especially near the bedrock surface

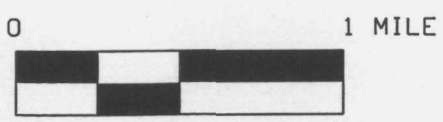
Shale of Ordovician age with thin interbedded limestone layers

Geologic contact
Dashed where approximate

Piezometric surface in lower aquifer
Based on water-level measurements made in October 1959; represents the water table where the till-rich zone is absent. Datum is mean sea level

250

Well
Number refers to well listed in the section "Records of Wells in the Dayton Area"



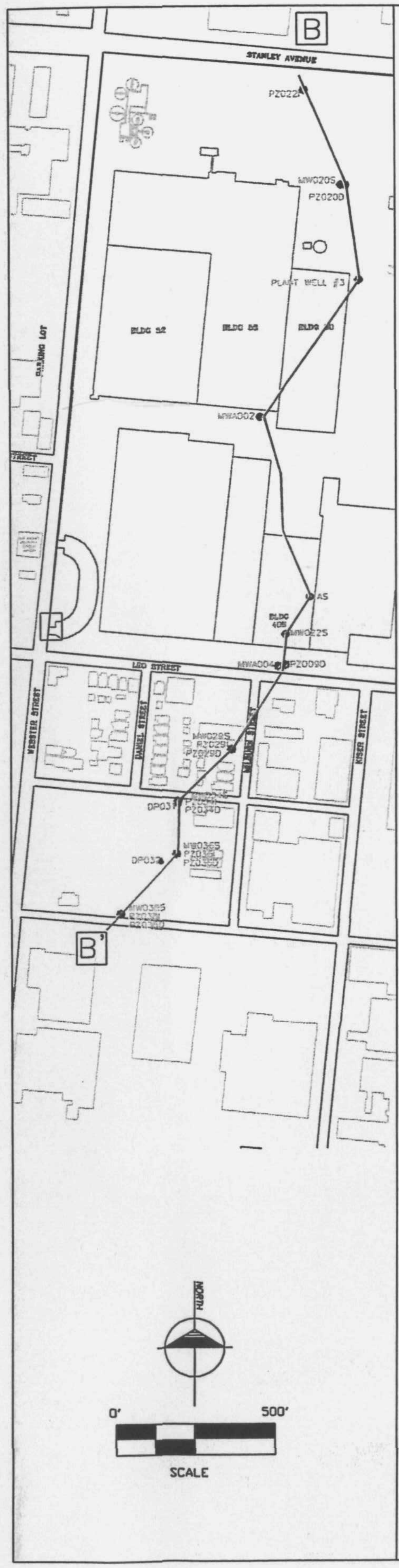
SCALE

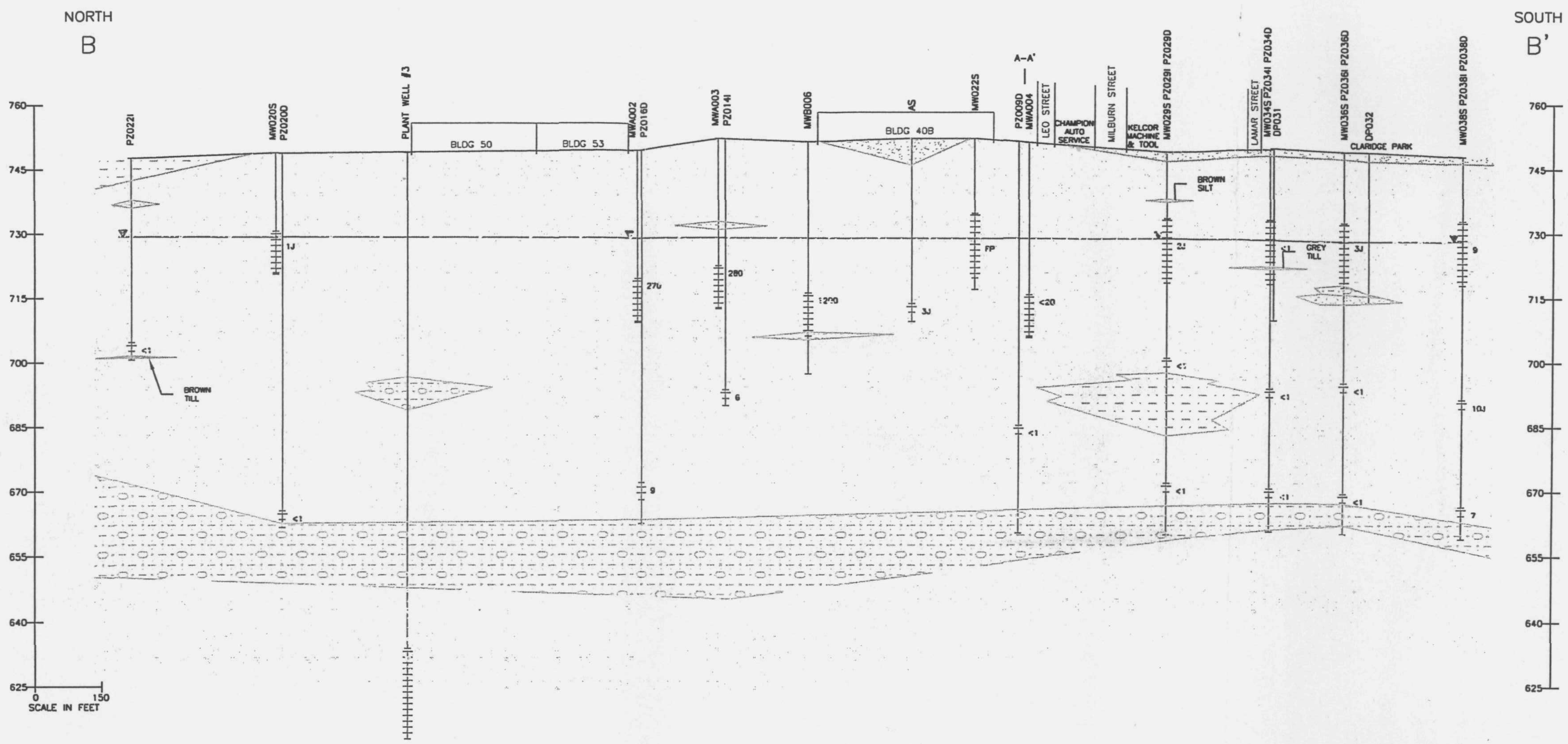
SOURCE: GROUND-WATER RESOURCES OF THE DAYTON AREA, OHIO (USGS DOCUMENT)

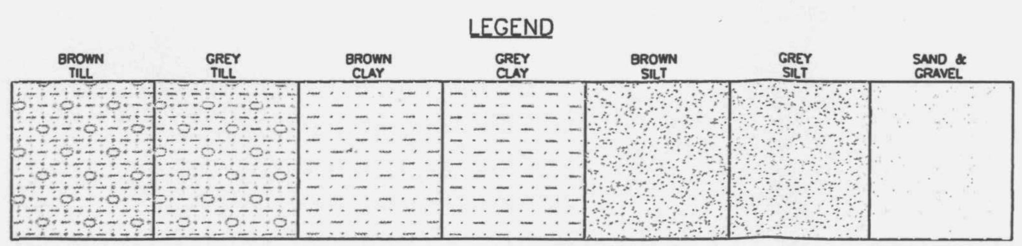
EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

USGS GEOLOGICAL CROSS-SECTIONS
DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: RS	DATE: March 11, 2003	SCALE: ------	USGS Cross Sections







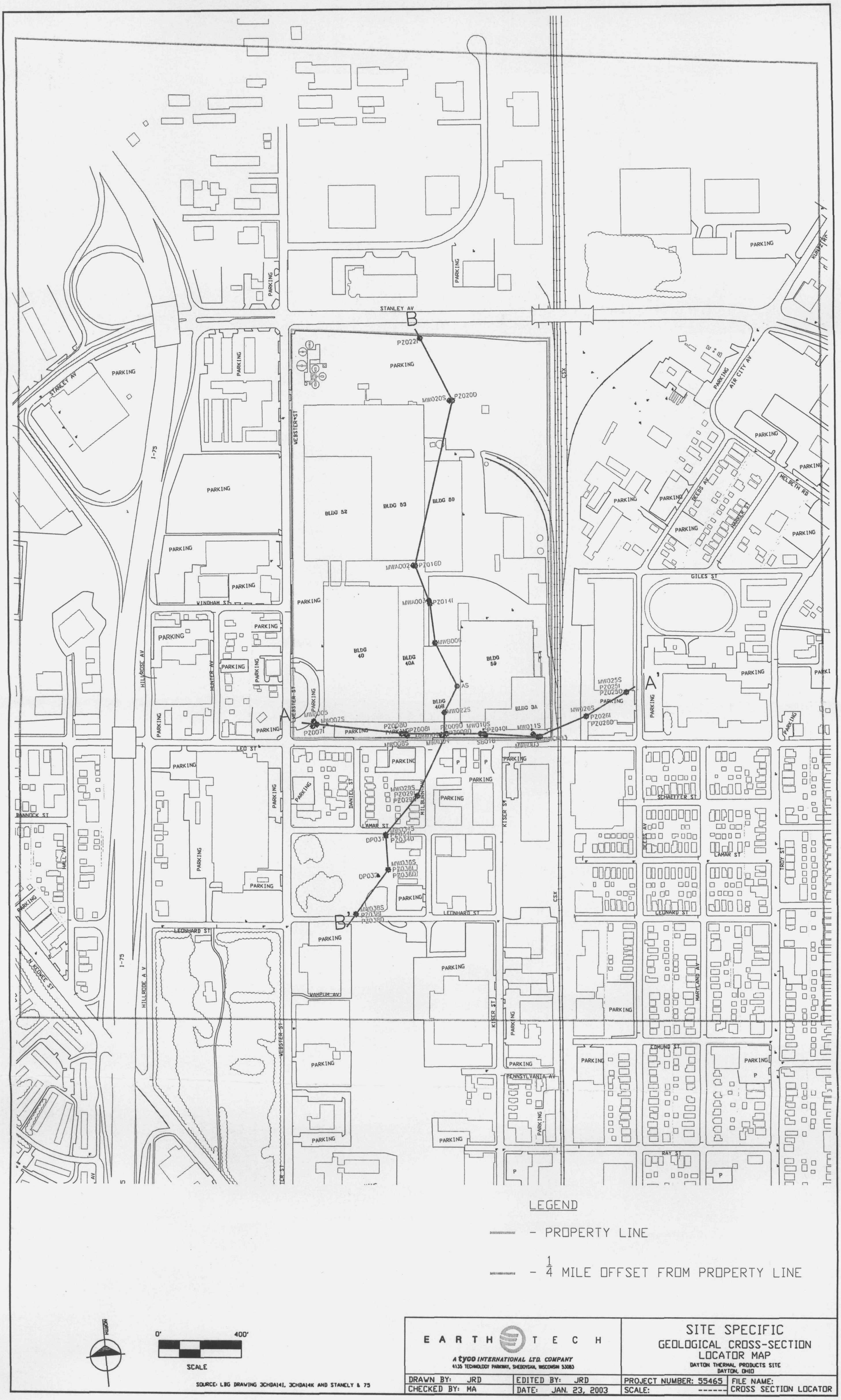
SOURCE: LBG DRAWING 3CHDA141 AND 3CHDA14K

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

SITE SPECIFIC NORTH-SOUTH GEOLOGICAL CROSS-SECTION

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS NS



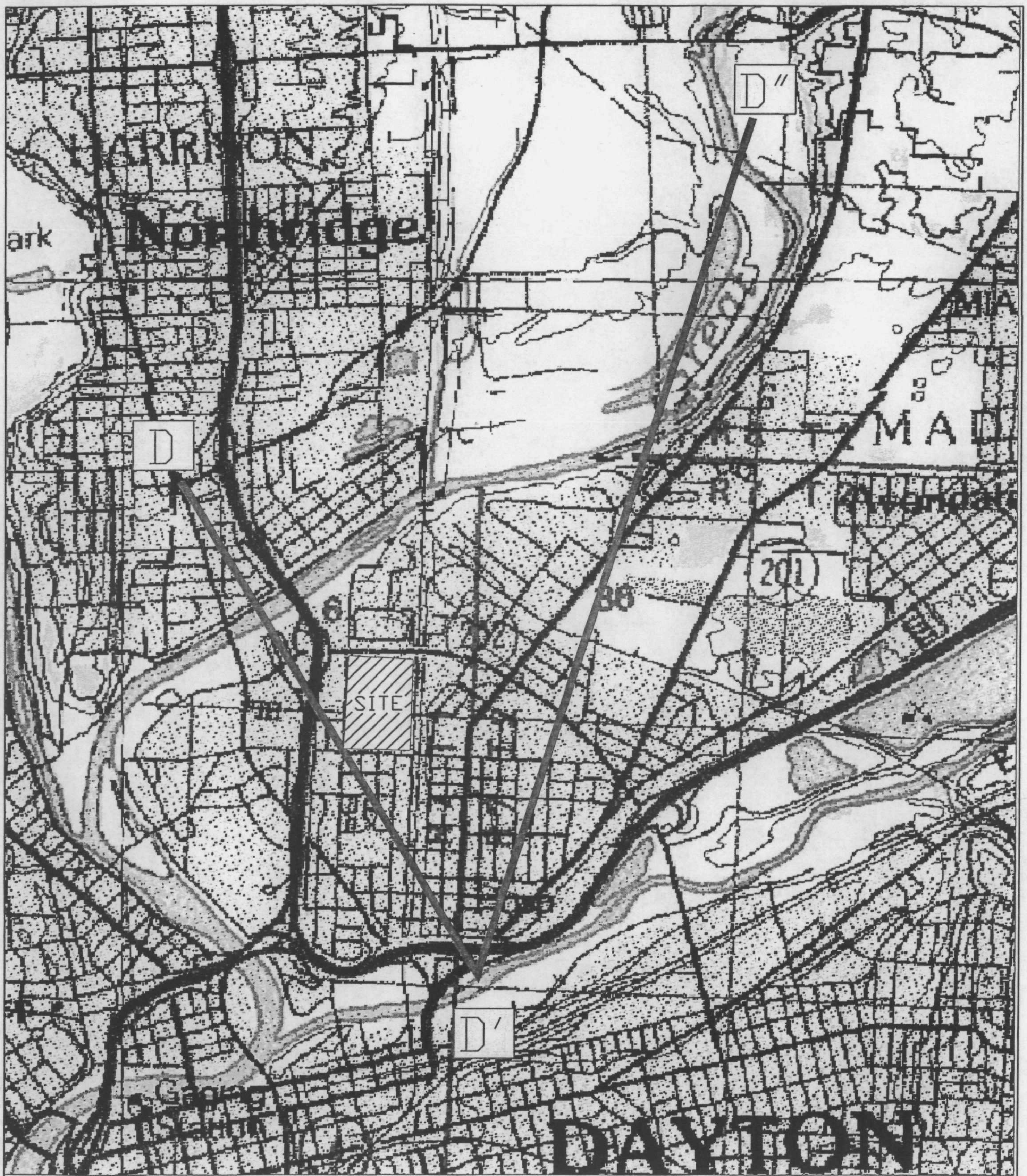
LEGEND

— PROPERTY LINE

— $\frac{1}{4}$ MILE OFFSET FROM PROPERTY LINE

SOURCE: LBG DRAWING 3CHDA141, 3CHDA14K AND STANELY & 75

EARTH TECH A tyco INTERNATIONAL LTD. COMPANY 4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083	SITE SPECIFIC GEOLOGICAL CROSS-SECTION LOCATOR MAP DAYTON THERMAL PRODUCTS SITE DAYTON, OHIO
DRAWN BY: JRD / EDITED BY: JRD	PROJECT NUMBER: 55465 / FILE NAME:
CHECKED BY: MA / DATE: JAN. 23, 2003	SCALE: ------ / CROSS SECTION LOCATOR



NORTH

0' 1/2 MILE

SCALE

SOURCE: USGS DAYTON, OHIO, UNITED STATES 01 JULY 1984

EARTH TECH

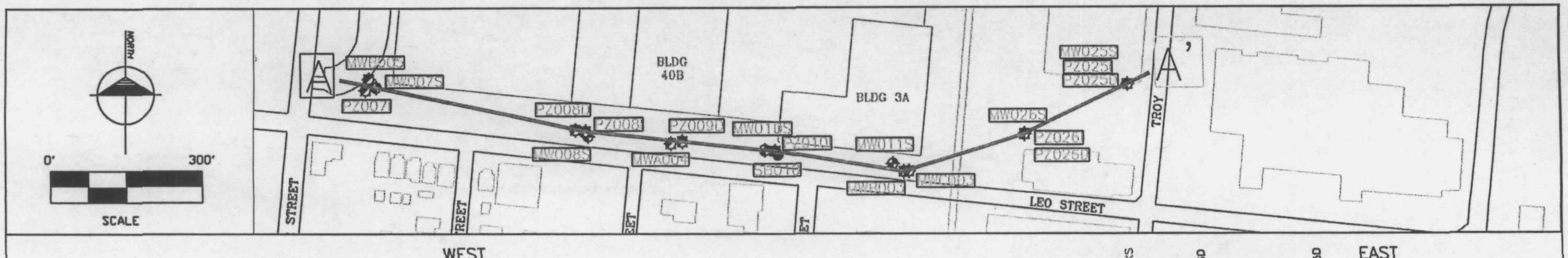
A tyco INTERNATIONAL LTD. COMPANY

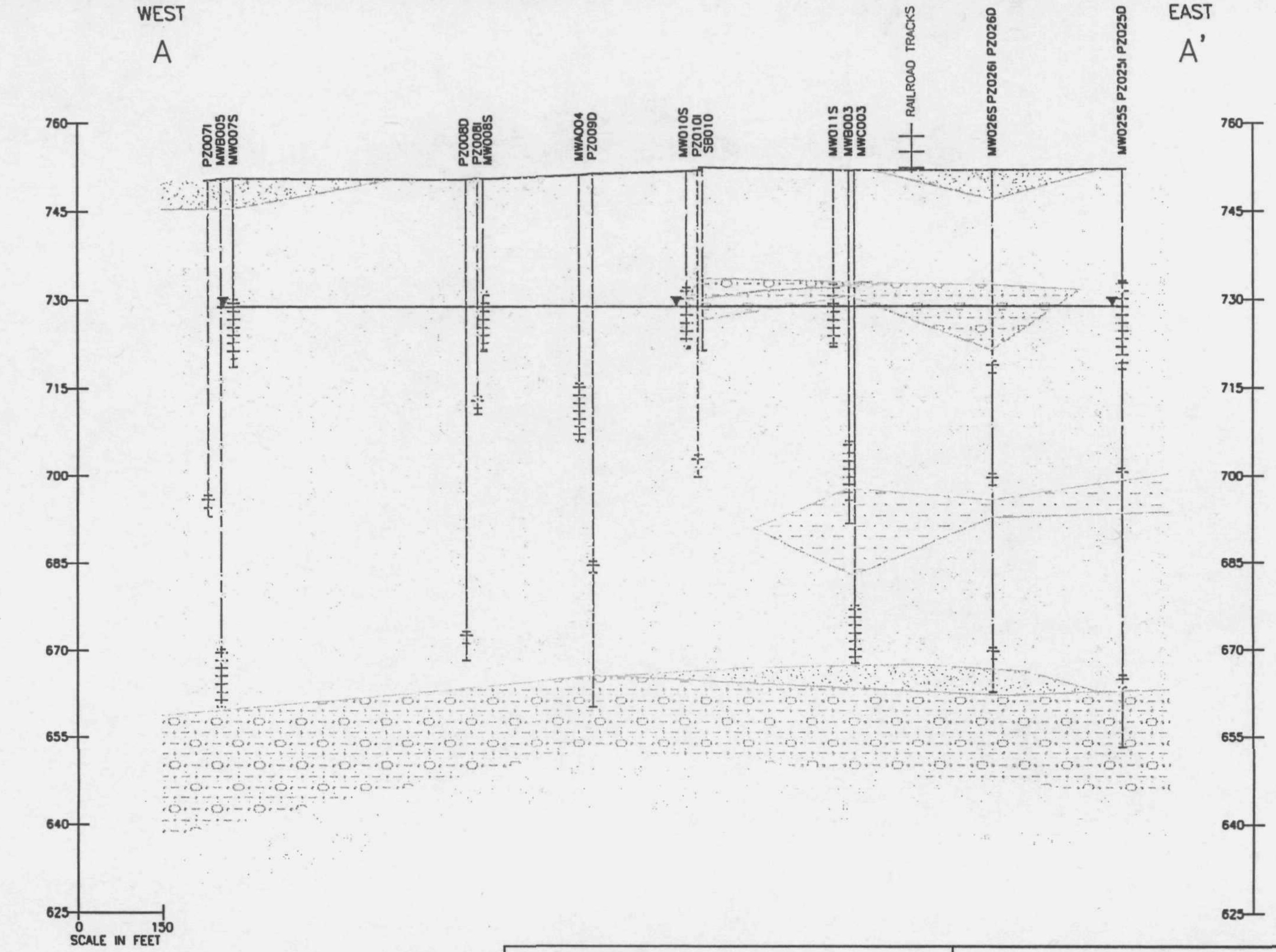
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

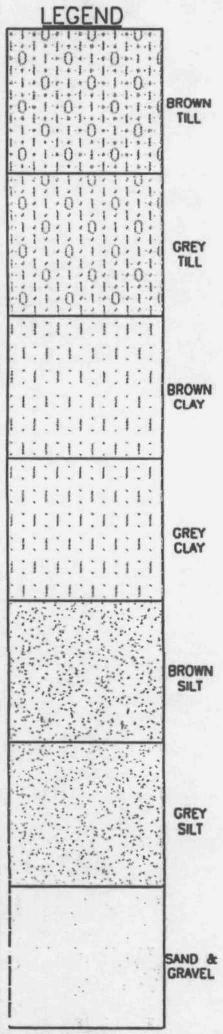
USGS
GEOLOGICAL CROSS-SECTION
LOCATOR MAP

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME: USGS X-LOCATOR
CHECKED BY: JK	DATE: MARCH 12, 2003	SCALE: 2" = 1 MILE	







SOURCE: LBG DRAWING 3CHDA14I AND 3CHDA14K

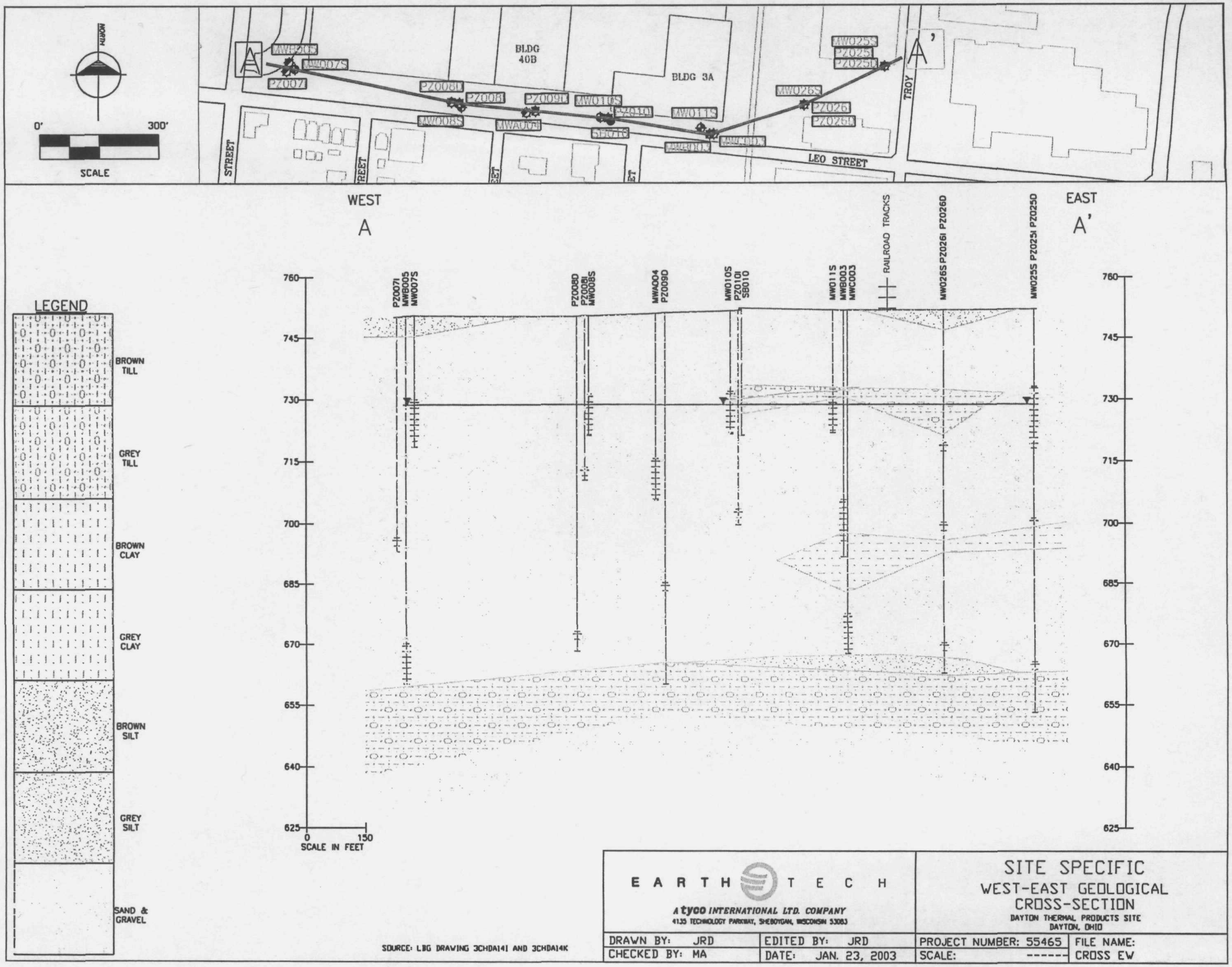
EARTH TECH

A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083

SITE SPECIFIC
WEST-EAST GEOLOGICAL CROSS-SECTION

DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO

DRAWN BY: JRD	EDITED BY: JRD	PROJECT NUMBER: 55465	FILE NAME:
CHECKED BY: MA	DATE: JAN. 23, 2003	SCALE: ------	CROSS EW


NORTH
0'
300'
SCALE
BLDG 40B
BLDG 3A
LEO STREET
TROY
STREET
A
A'
MW007S
PZ007
PZ008D
PZ008I
MW008S
PZ009D
MWA004
MW010S
PZ010
SB010
MW011S
MW003
MWC003
MW026S
PZ026
PZ026D
MW025S
PZ025I
PZ025D
WEST
EAST
RAILROAD TRACKS
PZ007I MWB005 MW007S
PZ008D PZ008I MW008S
MWA004 PZ009D
MW010S PZ010I SB010
MW011S MWB003 MWC003
MW026S PZ026I PZ026D
MW025S PZ025I PZ025D
760
745
730
715
700
685
670
655
640
625
0
150
SCALE IN FEET
LEGEND
BROWN TILL
GREY TILL
BROWN CLAY
GREY CLAY
BROWN SILT
GREY SILT
SAND & GRAVEL
SOURCE: LBG DRAWING 3CHDA14I AND 3CHDA14K
EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY
4135 TECHNOLOGY PARKWAY, SHEBOYGAN, WISCONSIN 53083
SITE SPECIFIC
WEST-EAST GEOLOGICAL
CROSS-SECTION
DAYTON THERMAL PRODUCTS SITE
DAYTON, OHIO
DRAWN BY: JRD
EDITED BY: JRD
CHECKED BY: MA
DATE: JAN. 23, 2003
PROJECT NUMBER: 55465
FILE NAME: CROSS EW
SCALE: ------

-- DRAFT FOR CLIENT REVIEW --

ENVIRONMENTAL SITE ASSESSMENT

March 16, 1992

Prepared for:

ACUSTAR INC.
Dayton Thermal Products Division
Dayton, Ohio

Project 124565

BURLINGTON
ENVIRONMENTAL

BURLINGTON ENVIRONMENTAL INC.
210 West Sand Bank Road
Post Office Box 330
Columbia, Illinois 62236-0330

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ENVIRONMENTAL SITE ASSESSMENT

ACUSTAR INC.
DAYTON THERMAL PRODUCTS DIVISION
DAYTON, OHIO

1 INTRODUCTION

Acustar Inc. (Acustar), a subsidiary of Chrysler Motors Corporation (Chrysler), requested the services of Burlington Environmental Inc. (Burlington) to assist in the performance of an environmental site assessment at their Dayton Thermal Products Division facility (the facility) in Dayton, Ohio. Burlington was requested to provide professional engineering and consulting services to assist Acustar in the review of the Dayton facility. This report addresses Burlington's initial effort, which focused primarily on acquiring and assimilating existing information concerning the facility and the immediate surrounding vicinity.

1.1 Purpose

The purpose of this assessment is to evaluate the site for potential environmental concerns resulting from current or past uses of the property or incidents that have occurred on adjacent properties that may have impacted the facility. This report documents the findings of the environmental site assessment and also outlines potential additional work that may be required to address findings of the assessment. The findings of this site assessment will aid in the development of a structured approach for performing future environmental investigations at the facility.

1.2 Project Approach

The assessment consisted of conducting a review of facility records, a site reconnaissance visit on January 28 and 29, 1992, and a preliminary review of United States Environmental Protection Agency (USEPA) and Ohio Environmental Protection Agency (OEPA) files pertaining to documented environmental concerns in the vicinity of the facility. Conclusions and recommendations resulting from this assessment are based on the following sources of information:

- review of plant records;
- interviews with current plant personnel;
- a visual reconnaissance of portions of the plant and surroundings; and
- review of regulatory agency files.

Sampling and analysis were not conducted as part of the environmental assessment, therefore analytical results were not used in formulating Burlington's conclusions and recommendations in this report.

1.3 Review Team and Acustar Contacts

The following Burlington review team conducted the site visit and review:

- Mr. Kevin Keller; and
- Mr. Michael J. Dvorsky.

The following Acustar plant and corporate contacts were made to provide background data and history of on-site operations:

- Mr. Luther Blair;
- Mr. Frank Kostusyk;

- Mr. Douglas Orf; and
- Mr. John Dull.

1.4 Report Format

The remainder of this report documents the findings of the review team's evaluation and assessment of environmental conditions at the facility at the present time. A description of the facility, including past and current operations, and the local geologic and hydrogeologic setting is presented in Chapter 2. A discussion of potential onsite and offsite sources of contamination, as well as a discussion of previous investigations is presented in Chapter 3. Findings and conclusions of the site assessment are presented in Chapter 4. Recommendations for future activities are discussed in Chapter 5.

2 SITE AND PROPERTY DESCRIPTION

The facility is located at 1600 Webster Street in Dayton, Ohio (Figure 1). Information gathered concerning the facility and the surrounding properties during Burlington's assessment are discussed in this chapter.

2.1 Facility Description

The facility is a 1.3 million square-foot masonry and steel building complex located on approximately 60 acres in Dayton, Ohio. The facility is located in a mixed residential and industrial setting. A site plan is shown in Figure 2. The facility is bounded on the north by Stanley Street, an Omega gas station, and Pierce Brothers Company, a concrete fabricator. To the east of the facility is the CSX Railroad, Gem City Chemical, American Lubricants, Nationwide Roofing, Heidelberg Distributors, and private residences. Leo Street, Heidelberg Distributors, Ris Paper, Marks Concept, an automotive garage, light commercial establishments, and private residences border the facility to the south. On the western boundary are Webster Street, Hohman Plating and Manufacturing Company, an interior decorating warehouse, Brainerd Industries, Southern Ohio Kitchens, and other light commercial structures.

2.2 Past Operations

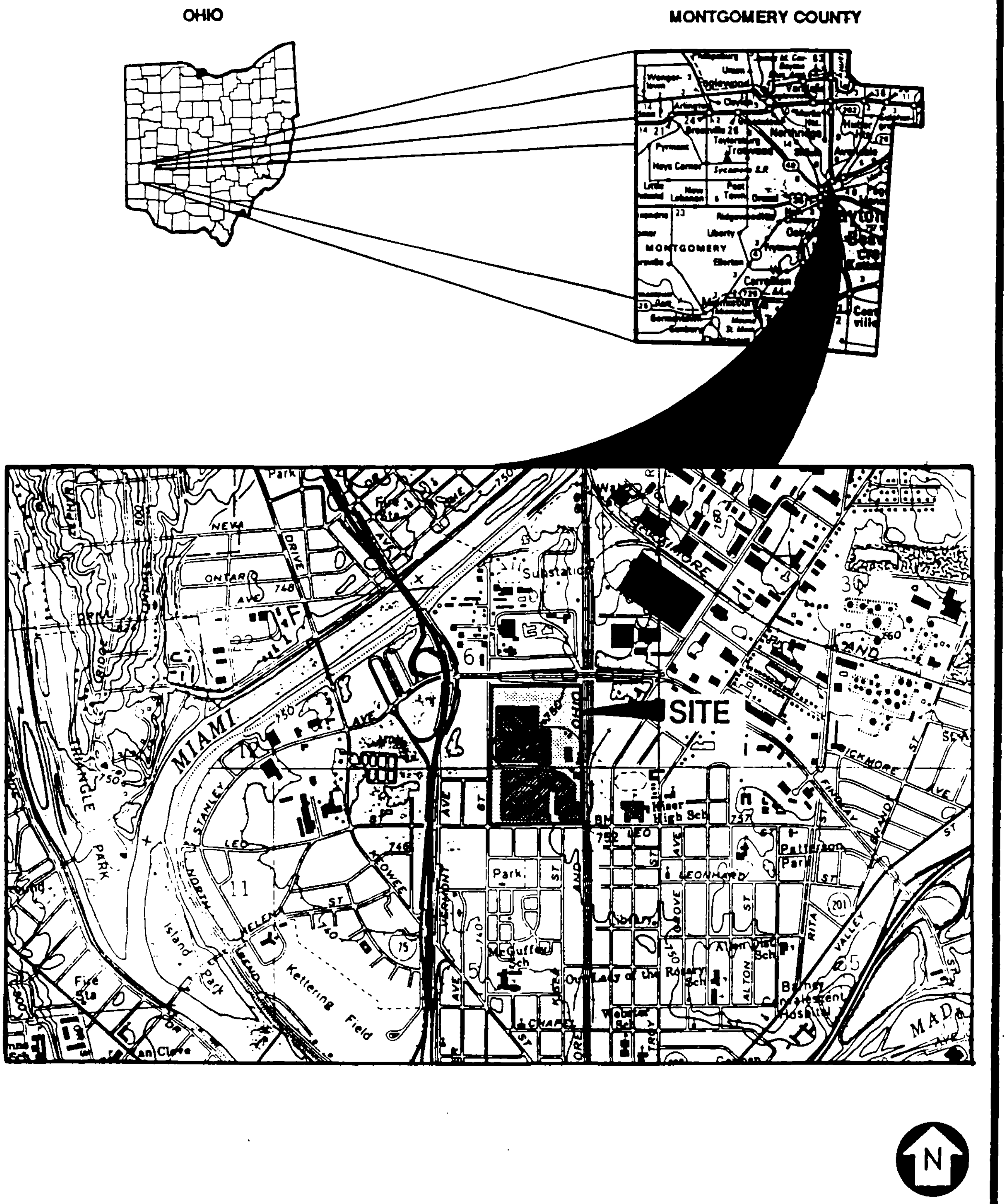
Manufacturing operations began at this site around 1907 at a facility called the Maxwell Complex. Maxwell cars were assembled at the facility. There is no definitive history of environmental or waste management operations conducted at the Maxwell Complex. Chrysler purchased the facility in 1936. The facility has been

PROJECT MANAGER

DOCUMENT MANAGER

CHECKED BY

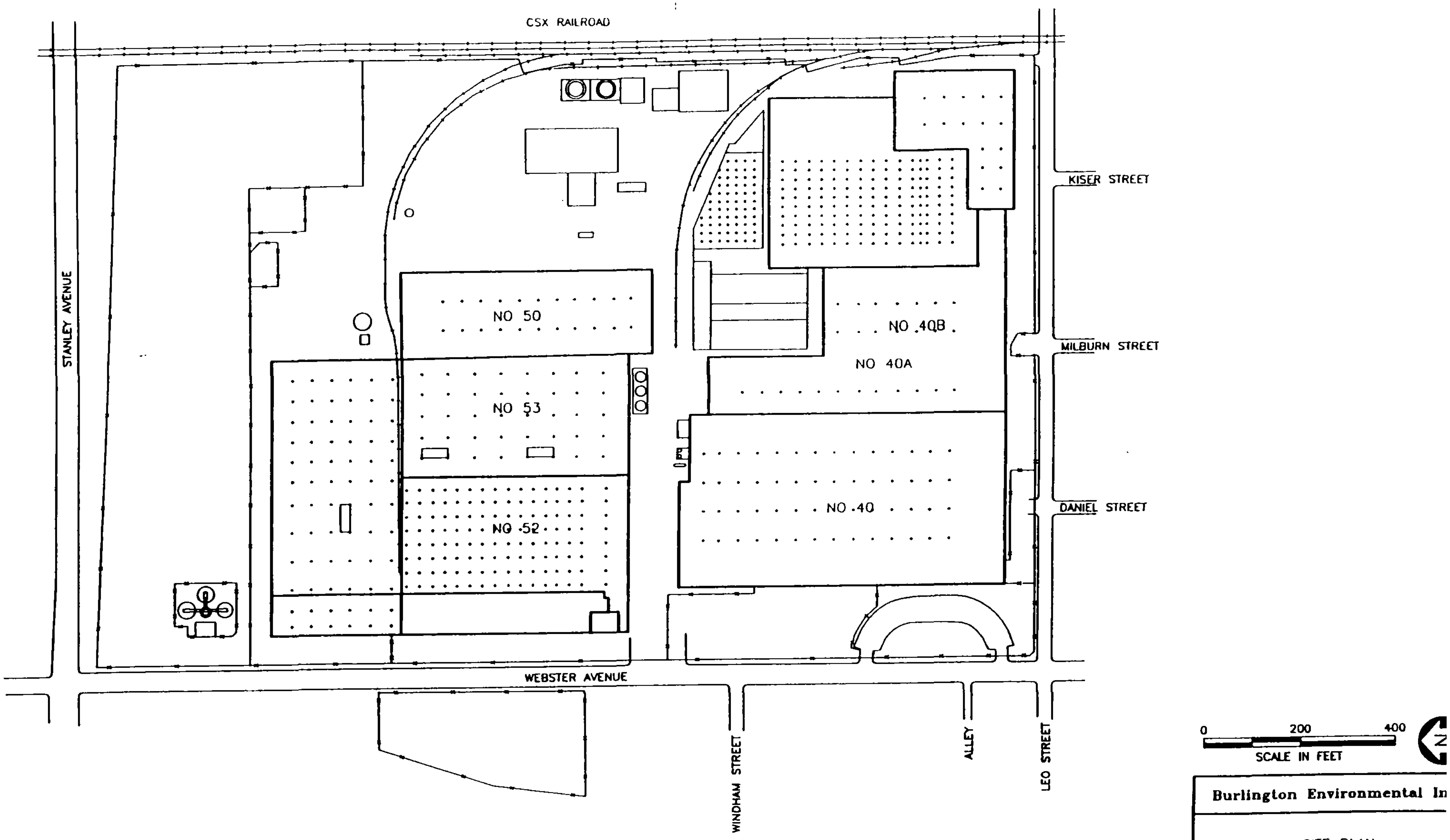
DRAWN BY



Modified from U.S.G.S Geoloical Survey, Dayton North, Ohio quadrangle, photo revised 1981.

Burlington Environmental Inc.	
SITE LOCATION MAP	
ACUSTAR DAYTON, OHIO 124565	FIGURE 1

A REV. DATE 3/12/92	DRAWN BY		CHECKED BY		DOCUMENT MANAGER		PROJECT MANAGER	



Burlington Environmental In

SITE PLAN

ACUSTAR
DAYTON, OHIO
124565

FIGURE

continuously expanded since that time. Chrysler removed the former Maxwell Complex Building No. 3 in 1990 and replaced it with a new manufacturing building in 1991.

Light machining, plating, metal stamping, welding, soldering, degreasing, painting, plastic molding, and assembly have been conducted at the facility in the past, as well as maintenance of the processes, equipment, and structures. Some of the products produced at the facility in the past included furnaces, air conditioners, cars, aluminum and copper tube and fire products, gun parts, bomb shackles, and plastic moldings.

2.3 Current Operations

Currently, air conditioning parts and plastic moldings for internal components of Chrysler products are produced at the facility. The manufacturing operations currently conducted at this location consists of cold metal stamping, aluminum and copper tube forming, machining, degreasing, painting, soldering, plastic molding, and minor assembly and packaging of components. Internal maintenance facilities are also located on-site, along with small quality assurance/quality control (QA/QC) laboratories. Final products are shipped to assembly plants by motor vehicle where they are installed in new cars.

Drinking water for the facility is obtained from the local Dayton Water Authority. Domestic sewage is disposed of through the City of Dayton Sanitary Sewer System and the Dayton Waste Water Treatment Facility, a publicly owned treatment works (POTW). Noncontact cooling water and process water are withdrawn from one of two on-site wells. The water used in cooling processes at the facility is discharged to ______________________________. Process waters and containment area waters are collected in various sumps and pumped to an on-site wastewater treatment system. At the on-site wastewater treatment system oils, metals, and solids are removed prior to discharge to ______________________.

The facility is heated by natural gas space heaters or steam that is produced on site. The facility operates its own powerplant. Steam is generated from natural gas with fuel oil used as a backup fuel source. The power plant was switched from coal fired systems to a natural gas system in the mid to late sixties or early seventies.

Access to the property is controlled by a cyclone fence. The facility is currently operated 24-hours a day, Monday through Friday. Limited maintenance work is performed on weekends. A security service oversees the facility both through visual and electronic means.

Most of the exterior areas at the facility are paved with either concrete or blacktop except for an area north and east of building No. 47, which is gravel. Surface water runoff is collected from the plant yards by a series of storm drains and flows to the Greater Miami River via the Webster Street and the Herman Street City Storm Sewer Outfalls. Runoff water from the existing Building No. 3A, Building No. 53, and the loading and receiving docks also enter the storm drain system.

The northern section of the facility is used for employee parking and empty part container storage. The east central portions of the facility property contain the boilerhouse, emergency fuel backup tanks, a hazardous waste storage area, and empty drum storage areas. Other areas are under roof and are part of the manufacturing complex.

2.4 New Building Construction

Since 1980 Chrysler had used the Old Maxwell Complex primarily as a warehouse. A decision was made to demolish the antiquated Old Maxwell Complex, erected about 1907, and replace it with a new modern manufacturing building. In October 1990, demolition of the Old Maxwell Complex began. Because of the structure's age and absence of accurate blueprints, some subsurface structures such as sewers were unexpectedly encountered. Air and soil monitoring were scheduled as part of the demolition process due to the potential of hazardous substances being encountered.

Lockwood, Jones and Beals, Inc. (LJB), of Kettering, Ohio, was the architectural firm in charge of construction of the new building. LJB initially contracted INTRON Laboratories (INTRON), of Kettering, Ohio, to conduct air monitoring for asbestos. INTRON was later asked to monitor the excavated soil during the demolition process for the presence of asbestos and volatile organic compounds (VOCs). INTRON subsequently retained Miami Geological Services, Inc., to collect soil samples at the demolition site and provide ongoing soil monitoring as additional soil was exposed.

As a result of the soil sampling and monitoring, Acustar became aware of potential environmental impacts in the area of the old Maxwell Complex. For example, localized chromium soil contamination was encountered during excavation. The impacted soil was excavated, analyzed, and disposed of appropriately.

Burlington Environmental Inc. (Burlington) was retained by Acustar in November 1990 to implement a comprehensive environmental testing and evaluation program for the area of new construction. Analytical results from soil samples collected in the area indicated the presence of low levels of total petroleum hydrocarbons (TPH), and selected VOCs (trichloroethene, 1,1,1-trichloroethane, tetrachloroethene, 1,1-dichloroethene, 1,1-dichloroethane, and total [cis- and trans-] 1,2-dichloroethene) in the new building's footprint.

During demolition of the Maxwell Complex, impacted soils from the excavation were stockpiled at the facility to be remediated onsite prior to offsite disposal. Four soil stockpiles were created in conjunction with remediation activities associated with the soil excavated from the footprint of Building No. 59, beginning in March 1991. Remediation activities consisted of the following:

- construction of a stockpile of "clean" soil (clean pile) in the parking lot in the northeast portion of the property;
- construction of a vapor extraction bed (TPH bed) north of Building No. 47 to treat soil impacted predominantly with oily material (TPH pile);
- construction of a second vapor extraction bed (VOC bed) north of Building No. 47 to treat soil impacted predominantly with VOCs (VOC pile); and
- construction of a third vapor extraction bed southeast of the TPH bed to treat soil potentially impacted by numerous types of compounds (fourth pile).

The clean soil stockpile consists of approximately 7,100 cubic yards (yd^3) of soil containing no visible staining, less than 40 milligrams per kilogram (mg/kg) TPH, and less than 50 micrograms per kilogram ($\mu g/kg$) VOCs.

The VOC pile consists of approximately 2,800 yd^3 of soil containing the highest concentrations of VOCs (up to an approximate total of 10,000 $\mu g/kg$). Two blowers (Rotron Model 707) are connected by manifolds to the piping at the base of the bed.

The TPH pile consists of approximately 10,800 yd^3 of soil containing the highest concentrations of TPH (from 40 to 3,500 mg/kg) and visibly stained soil. Two blowers (Rotron Model 808) are connected by manifolds to the piping at the base of the bed.

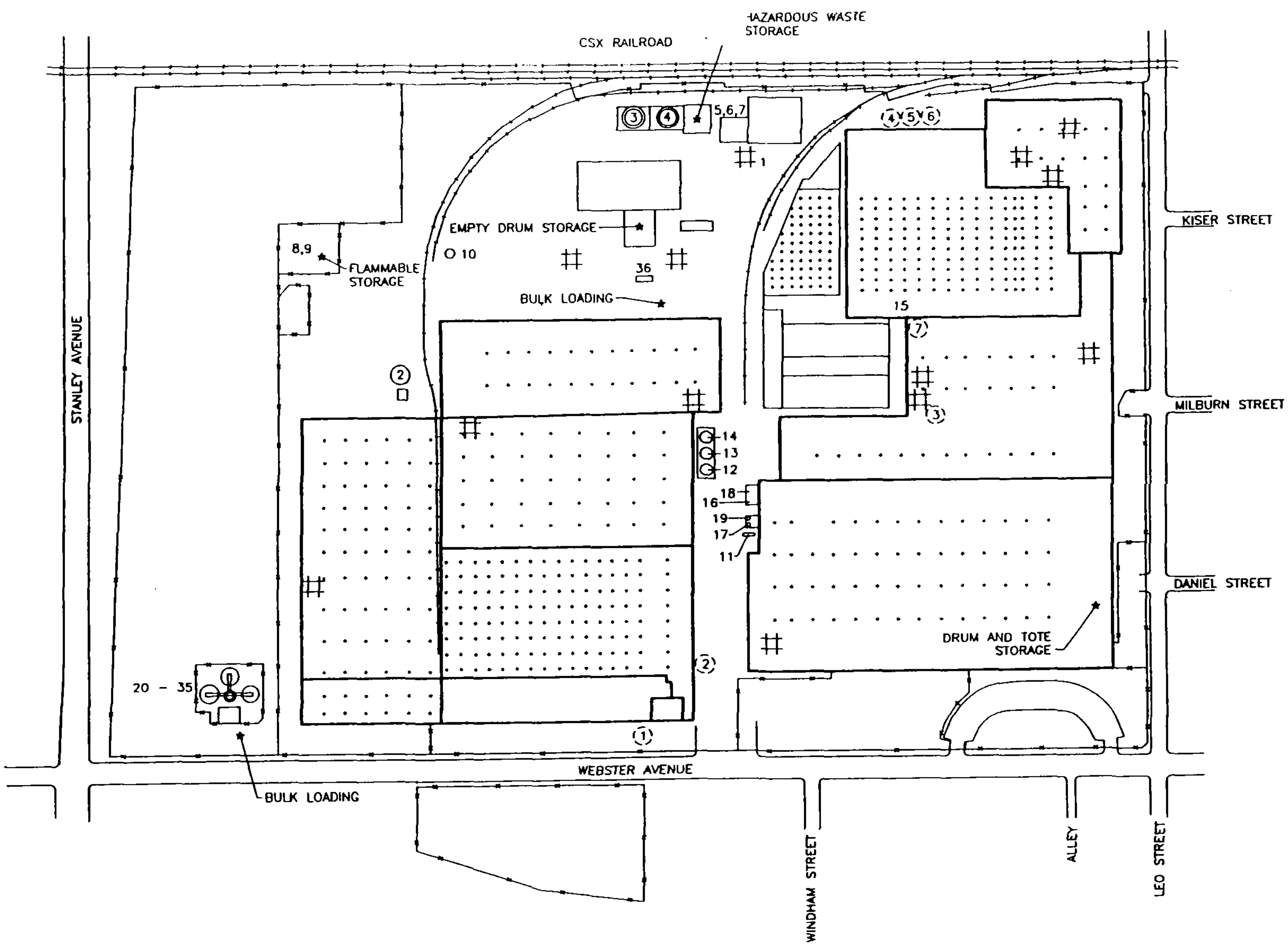
The fourth pile consists of approximately 1,800 yd^3 of soil containing unknown concentrations of chemical compounds. There are currently no blowers connected to the bed.

The blowers on the vapor extraction beds have not been in operation for approximately eight months. In the period of time since the blowers were turned off, the polyethylene sheetings that covered each of the piles have been ripped and blown off, exposing the impacted soil for each of the stockpiles.

During excavation in the footprint of the new building, a small amount of oily material was observed seeping from the foundation of Building 40B. The material was sampled and analyzed. Analytical results indicated the oily substance to be __________. The potential source of the material was determined to be the freon degreasing operation located immediately west of the wall of Building 40B. Soil impacted by this oily material was excavated and subsequently incinerated. Confirmational testing was conducted to evaluate the extent of contaminated soils that required excavation.

2.5 Geologic and Hydrogeologic Setting

The geologic and hydrogeologic setting of the area consists of 2 to 4 feet of disturbed native soil (clay) underlain by very thick and continuous calcareous sand and gravel deposits. The highly permeable sands and gravel fill a preglacial valley eroded into the underlying bedrock. According to the Groundwater Resources map of Montgomery County (Schmidt, 1986), the Dayton facility overlies a portion of the Great Miami River aquifer that can potentially yield in excess of 1,000 gallons per minute of water to a properly constructed well. The Great Miami River aquifer is a designated sole source aquifer. The facility is not included in the city of Dayton's Well Field Protection Overlay District or One Year Capture Boundary. A literature review (Spieker, 1968 and Norris and Spieker, 1966) indicates regional groundwater flow in the vicinity of the plant is to the south with a gradient of about 5 to 10 feet per mile. However, due to the complex nature of the shallow hydrogeology of the area surrounding the facility and the unknown influences of the Mad River Depression and the Little Miami River, groundwater flow direction in the vicinity of the facility has not been determined to date. Groundwater levels in the area may fluctuate 5 to 15 feet per year, generally rising in the winter and spring and falling in the summer and fall. The glacial outwash may be separated into several distinct hydrogeological units by thin (2 to 15 feet thick) layers or lenses of till (clay) in the immediate vicinity of the plant.



EXPLANATION

- (1) UNDERGROUND STORAGE TANK
- 1 ABOVE GROUND STORAGE TANK
- ★ STORAGE AND BULK LOADING
- # INDUSTRIAL CLEANING SOLUTION TANKS 250-500 GALLON

NOTE: Reference Table 1 for tank capacity, contents, and current usage status.

0 200 400
SCALE IN FEET

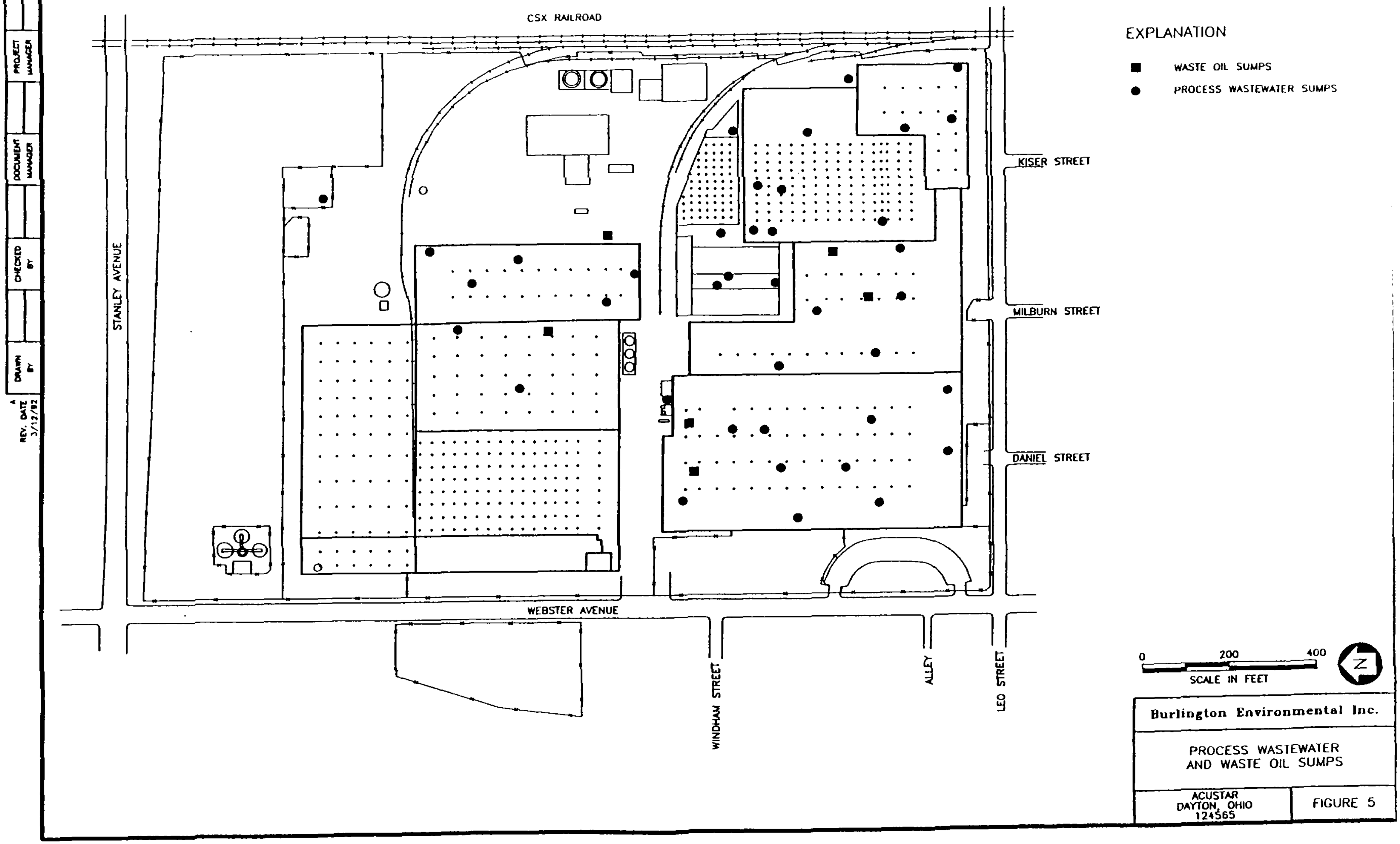
Burlington Environmental I

FORMER AND EXISTING STORA
TANKS, STORAGE AREAS, AN
BULK LOADING AREAS

ACUSTAR
DAYTON, OHIO
124565

FIGURE

REV.	DATE	DRAWN BY	CHECKED BY	DOCUMENT MANAGER	PROJECT MANAGER
A	3/12/92				

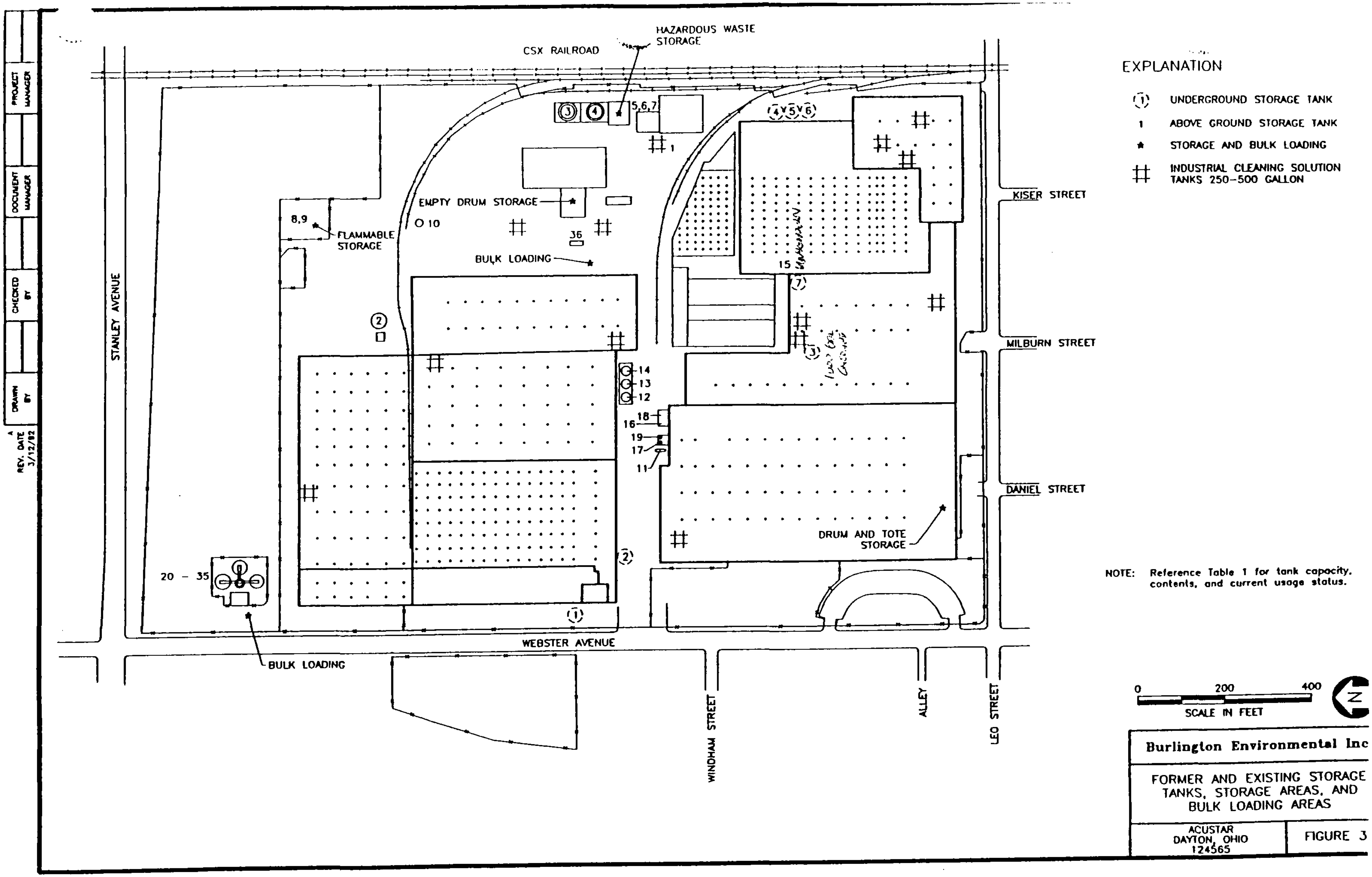


Burlington Environmental Inc.

PROCESS WASTEWATER AND WASTE OIL SUMPS

ACUSTAR DAYTON, OHIO 124565

FIGURE 5


CSX RAILROAD
HAZARDOUS WASTE STORAGE
5,6,7
EMPTY DRUM STORAGE
8,9
FLAMMABLE STORAGE
O 10
36
BULK LOADING
15
14
13
12
18
16
19
17
11
DRUM AND TOTE STORAGE
20 - 35
BULK LOADING
STANLEY AVENUE
WEBSTER AVENUE
WINDHAM STREET
ALLEY
LEO STREET
KISER STREET
MILBURN STREET
DANIEL STREET
EXPLANATION
UNDERGROUND STORAGE TANK
ABOVE GROUND STORAGE TANK
STORAGE AND BULK LOADING
INDUSTRIAL CLEANING SOLUTION TANKS 250-500 GALLON
NOTE: Reference Table 1 for tank capacity, contents, and current usage status.
0
200
400
SCALE IN FEET
Burlington Environmental Inc
FORMER AND EXISTING STORAGE TANKS, STORAGE AREAS, AND BULK LOADING AREAS
ACUSTAR
DAYTON, OHIO
124565
FIGURE 3
PROJECT MANAGER
DOCUMENT MANAGER
CHECKED BY
DRAWN BY
REV. DATE
A
3/12/92

3 POTENTIAL ENVIRONMENTAL IMPACTS

Various activities performed at the facility and in the immediate surroundings of the facility may have had a potential impact on the environment. Some of the activities include spills and releases at sites near the plant, as well as releases from past and ongoing operations at the facility. These items will be reviewed in the near future, along with a more detailed review of historical investigations at the facility to determine if any potential impacts have occurred or are possible.

3.1 Potential Sources

Various potential contamination sources may impact the plant environs. These include both on-site and off-site sources that may be current or historical in nature. These potential sources are discussed in the following sections.

3.1.1 On-Site Sources

A number of potential on-site sources of possible environmental contamination were noted during the site visit. These potential sources included underground storage tanks, process units, hazardous waste generation/accumulation areas, process sumps, and past spills. On-site facilities or processes that would have the possibility of being areas of environmental concern have been identified on a series of figures.

Approximate locations of "known" former and existing storage tanks at the facility are shown in Figure 3. The storage tanks, their size, contents, and active status are indicated in Table 1. The water, propane, and plastic pellet storage vessels would not be expected to be potential source areas, while the fuel, degreaser,

Table 1

STORAGE TANK SUMMARY

ENVIRONMENTAL SITE ASSESSMENT
DAYTON THERMAL PRODUCTS DIVISION
DAYTON, OHIO

Tank ID Number	Storage Tank Contents	Tank Size) (gallons)	Status
U-1	Gasoline (unleaded)	5,000	Active
U-2	Gasoline (indolene)	550	Active
U-3	Gasoline	1,000	Inactive
U-4	Fuel Oil	500	Inactive
U-5	Fuel Oil	500	Inactive
U-6	Fuel Oil	500	Inactive
U-7	Unknown	Unknown	Inactive
A-1	Water	100,000	Inactive
A-2	Water	250,000	Active
A-3	Fuel Oil	125,000	Active
A-4	Fuel Oil	125,000	Active
A-5	Diesel Fuel	500	Active
A-6	Diesel Fuel	250	Active
A-7	Kerosene	250	Active
A-8	Propane	30,000	Inactive
A-9	Propane	30,000	Inactive
A-10	Plastic Silo	*193	Inactive
A-11	Freon	5,900	Active
A-12	1,1,1-Trichloroethane	5,200	Active
A-13	1,1,1-Trichloroethane	5,200	Active
A-14	1,1,1-Trichloroethane	5,200	Inactive
A-15	1,1,1-Trichloroethane	3,000	Inactive
A-16	1,1,1-Trichlor Degreaser Sludge	8,200	Inactive
A-17	Freon/Trichlor Degreaser Sludge	8,200	Active
A-18	Waste Oil	8,200	Inactive
A-19	Waste Oil	8,200	Active
A-20	Flotation Oil - WTP	10,000	Active
A-21	Oil Decant - WTP	57,000	Active
A-22	Sulfuric Acid - WTP	16,000	Inactive
A-23	Sulfuric Acid - WTP	6,000	Active
A-24	Lime Bin - WTP	*25	Active
A-25	Alum - WTP	6,000	Active
A-26	Sulfite - WTP	1,000	Active
A-27	Batch Tank - WTP	200,000	Active
A-28	Batch Tank - WTP	200,000	Active
A-29	Batch Tank - WTP	200,000	Active
A-30	Batch Tank - WTP	350,000	Active
A-31	Solids Clarifier - WTP	110,000	Active
A-33	Caustic - WTP	2,900	Active
A-34	Polymer - WTP	1,000	Active
A-35	Polymer - WTP	800	Active
A-36	Propane	30,000	Active

Note: See Figure 3 for tank locations.

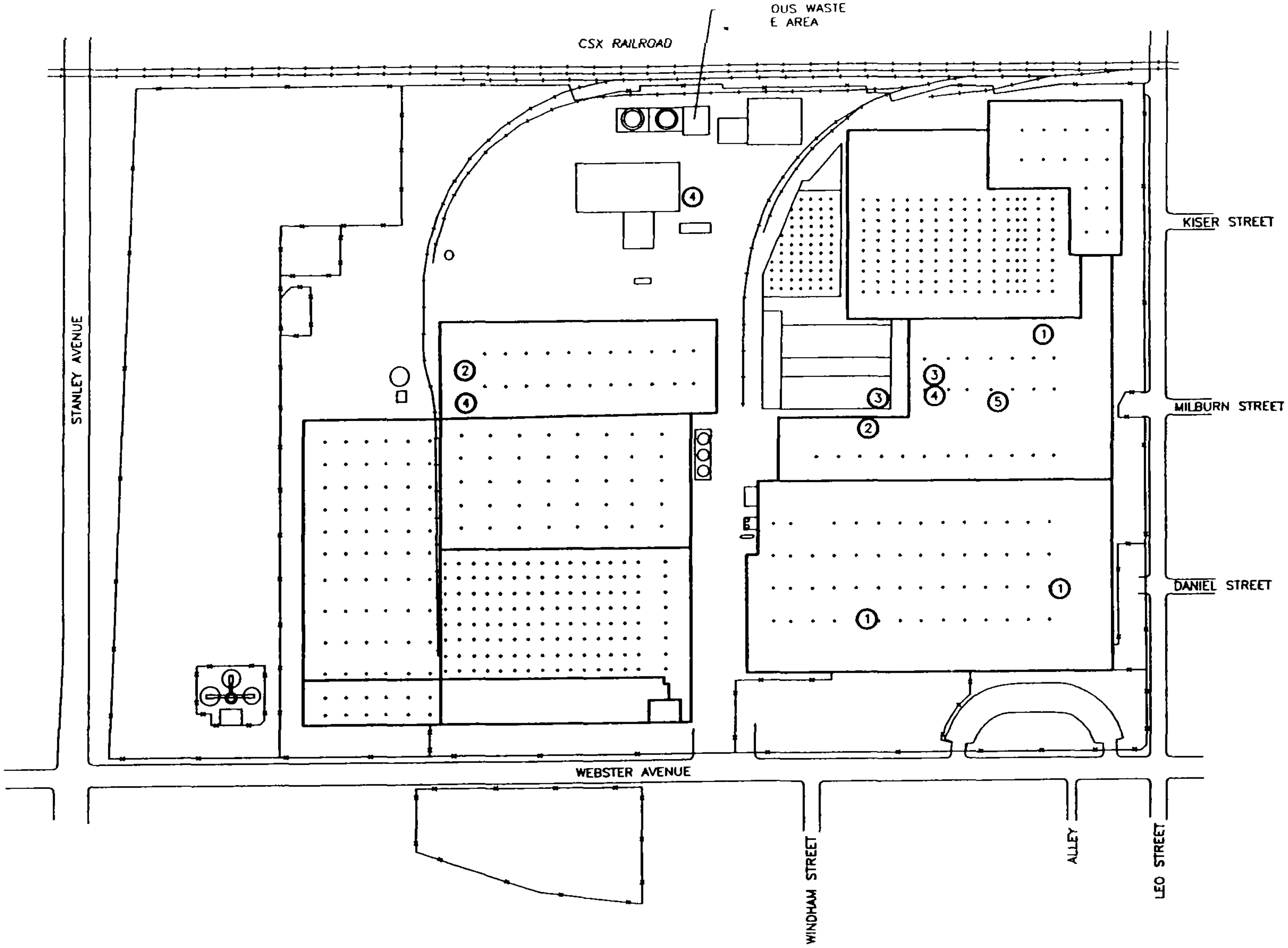
A Aboveground storage tank.
U Underground storage tank.
WTP Water Treatment Plant.
* Tank size is in tons (contents are solid products).

and waste vessels may be potential source areas. Locations of hazardous waste generation/accumulation areas are shown in Figure 4. Descriptions and hazard codes for the wastes are provided in Table 2.

Process wastewater and waste oil sumps along with oil separators are shown in Figure 5. The majority of these sumps have been relined and coated to increased their integrity and prevent future discharge of materials. Therefore, these units will be considered only as potential former sources of contamination at this point. Process areas present another potential source of contamination. Although most of the process units were installed on concrete floors, the potential exists for escape to the environment through expansion joints and cracks. Contaminated materials and media uncovered during construction activities have indicated these units as possible past release sources. The process units and areas are shown on Figure 6. Descriptions of the process equipment shown in Figure 6 are provided in Table 3. Acustar has identified a majority of these potential sources and has begun a program of substitution to potentially less damaging process systems. A number of freon degreasers have been shut down and replaced with other process units. Other processes have substituted process chemicals to potentially less environmental damaging materials. This ongoing program will substantially reduce the potential for future releases from these units.

3.1.2 Potential Off-Site Sources

Burlington conducted a survey of USEPA and OEPA data bases (as of 1991). The survey was conducted using Zip Code areas. The survey was conducted for Zip Code area 45404, which includes the facility and Zip Code area 45414, which includes the adjacent area of Montgomery County. The survey was conducted to identify sites currently existing on the USEPA National Priority List, CERCLIS,



EXPLANATION

① HAZARDOUS WASTE GENERATION OR ACCUMULATION AREA

NOTE: Reference Table 2 for hazardous material generated or accumulated at each area.

0 200 400

SCALE IN FEET

N

Burlington Environmental Inc

HAZARDOUS WASTE GENERATION/ ACCUMULATION AREAS

ACUSTAR
DAYTON, OHIO
124565

FIGURE 4

REV. DATE	DRAWN BY	CHECKED BY	DOCUMENT MANAGER	PROJECT MANAGER
A 3/12/92				

Table 2

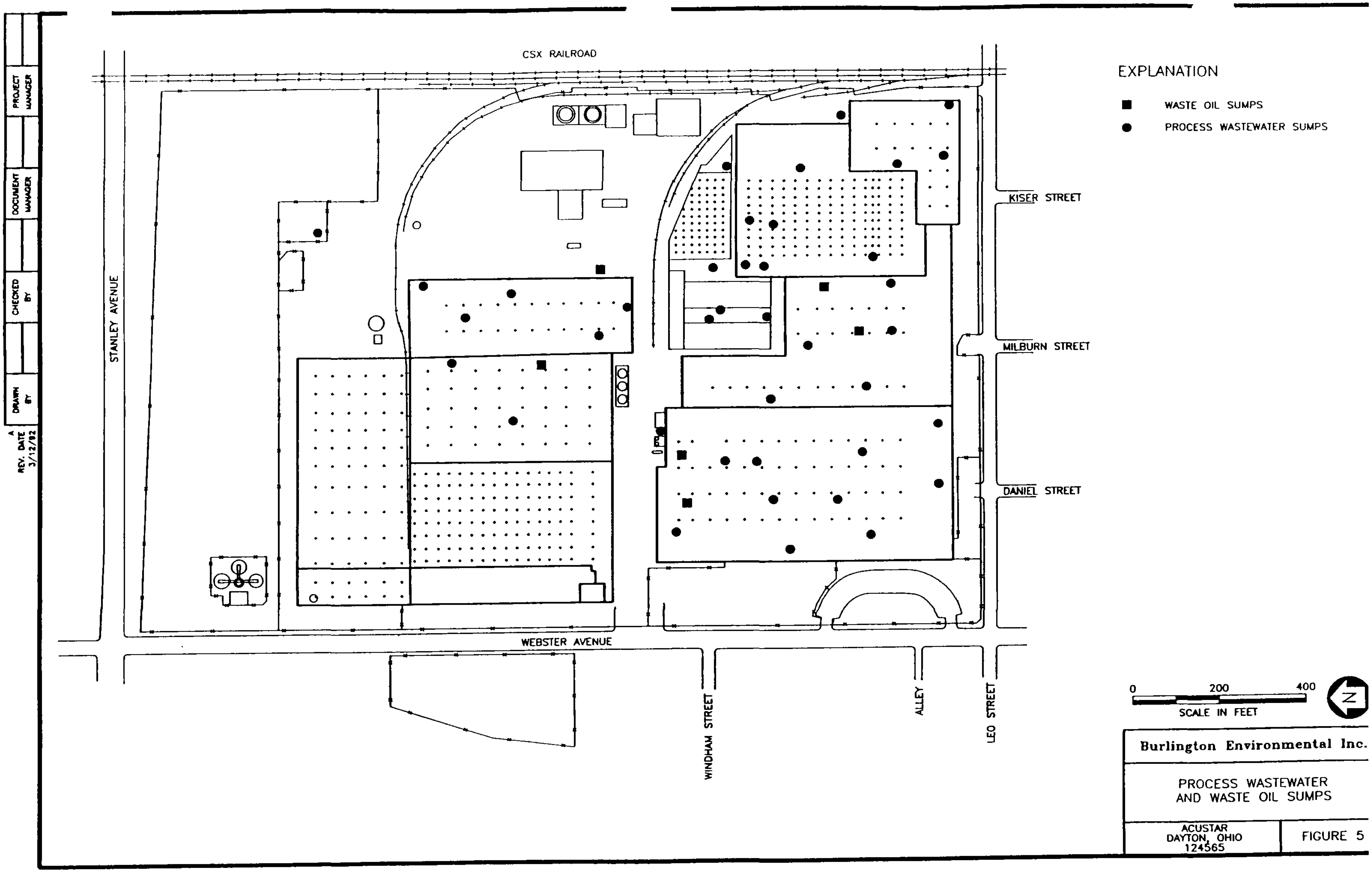
HAZARDOUS WASTE STREAM IDENTIFICATION

ENVIRONMENTAL SITE ASSESSMENT
DAYTON THERMAL PRODUCTS DIVISION
DAYTON, OHIO

Reference Code	Hazardous Description	EPA Hazard Waste Number	Code
1	Freon Degreaser Sludge	F001	T
2	1,1,1-Trichloroethane Degreaser Sludge	F002	T
3	Paint Waste with Isobutyl Alcohol	D001	I
4	Paint Waste	D007	E
5	Metal Sludge with Magnesium	D003	R

Note: See Figure 4 for locations of hazardous waste streams.

E EP Toxic.
I Ignitable.
T Toxic.
R Reactive.

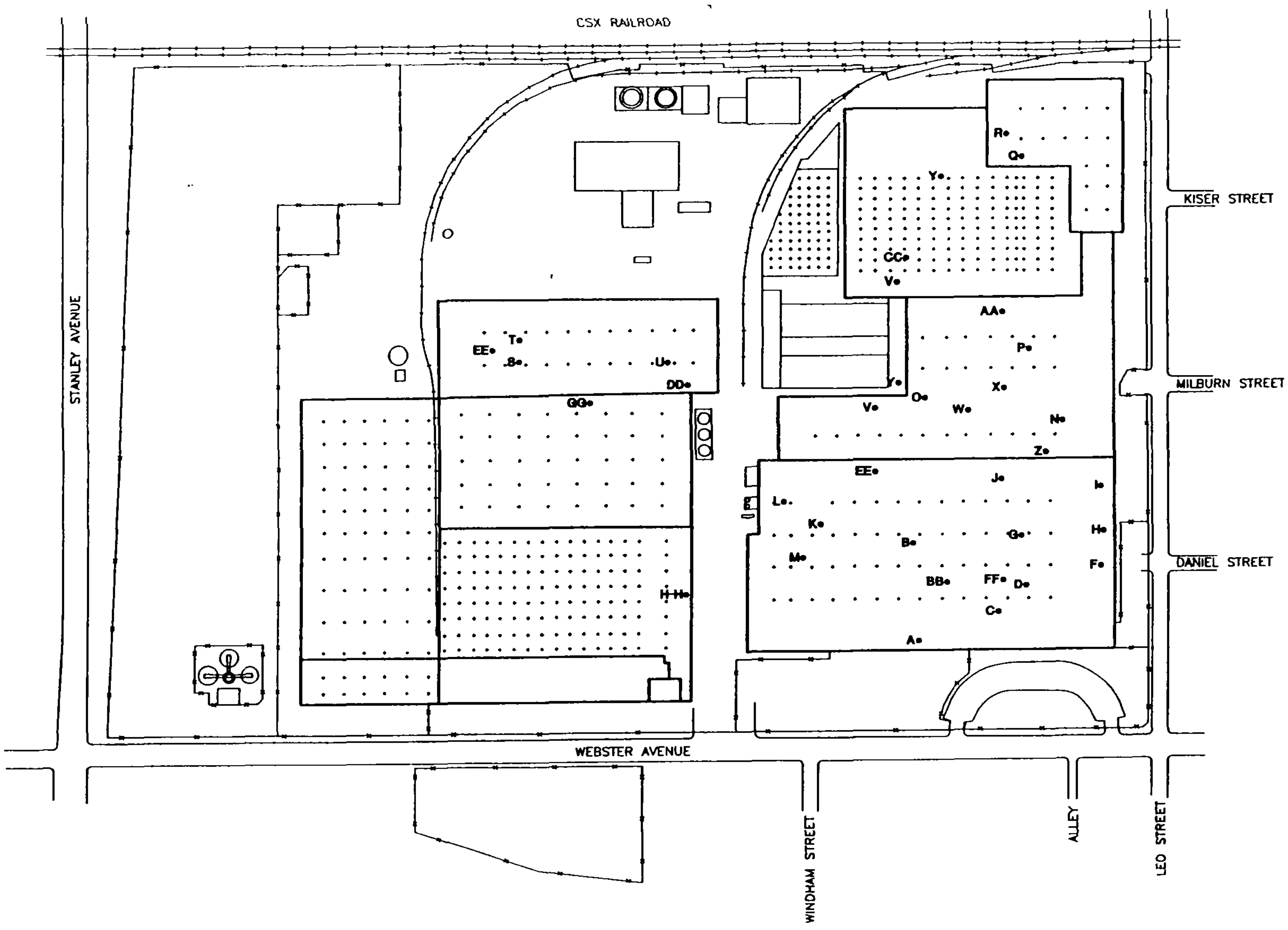


Burlington Environmental Inc.

PROCESS WASTEWATER
AND WASTE OIL SUMPS

ACUSTAR
DAYTON, OHIO
124565

FIGURE 5



EXPLANATION

H• PROCESS UNIT AND LOCATION

NOTE: Reference Table 3 for Process Unit Description.

0 200 400
SCALE IN FEET

N

Burlington Environmental Inc

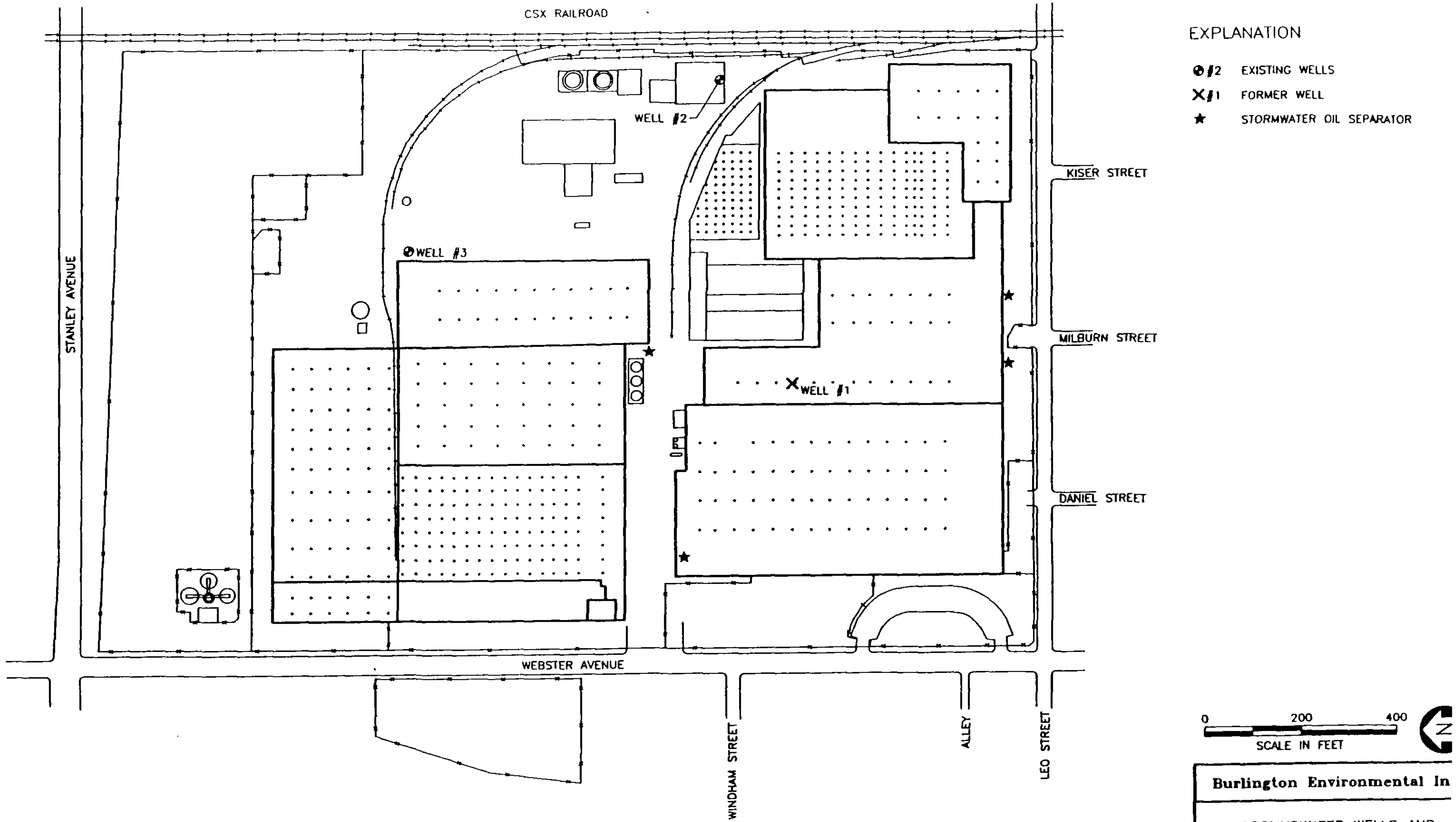
PROCESS UNITS AND AREAS

ACUSTAR
DAYTON, OHIO
124565

FIGURE 6

DRAWN BY	CHECKED BY	DOCUMENT MANAGER	PROJECT MANAGER

REV. DATE A 3/12/92



A	3/12/92						
REV.	DATE	DRAWN BY		CHECKED BY		DOCUMENT MANAGER		PROJECT MANAGER

Burlington Environmental In

GROUNDWATER WELLS AND STORMWATER OIL SEPARATOR

ACUSTAR
DAYTON, OHIO
124565

FIGURE

Table 3

PROCESS EQUIPMENT DESCRIPTION

ENVIRONMENTAL SITE ASSESSMENT
DAYTON THERMAL PRODUCTS DIVISION
DAYTON, OHIO

A. First Impregnation, Loctite System
B. Shaft Assembly, Washer Dept 9295
C. West Coolant Pit
D. Cargill Washer
E. Piston Washer
F. South Shell Washer
G. East Coolant Pit
H. South Coolant Pit
I. Second Impregnation, Loctite System
J. North Coolant Pit
K. Shaft Washer, Dept. 9290
L. Clutch Retainer Washer
M. Steel Machining Coolant Pit
N. Phosphating Washer
O. Cleaner Tanks, Dept. 9221
P. Paint Booth
Q. Paint Booth
R. New Washer
S. Washer Tanks, Dept. 9227
T. Cleaner Tanks, Dept. 9227
U. Flush Washer System
V. Manpro Degreaser
W. Plate/Fin Evaporator Degreaser
X. Parts Degreaser (Removed in 1982)
Y. Plating Operation - Zinc Chromate
Z. Swashplate Heat Treatment Machine
AA. New Detrix Degreaser
BB. Compressor Parts Degreaser (Removed in 1976)
CC. Dip Tank (Removed in 1984)
DD. Degreaser (Removed in 1981)
EE. Detrex Degreaser (Removed in 1991)
FF. Freon Degreaser
GG. Xylol-based Paint Booth (Removed in 1981)
HH. Vapor Degreaser

FINDS, RCRA Listings, etc. Identified sites are listed in Appendix A. Their locations are plotted on Plate 1.

Below is a brief summary of the records review:

- no sites were listed on the National Priorities (Superfund) List (NPL) (This data base lists sites known to be uncontrolled or abandoned waste sites identified for priority remedial actions under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 Program.);

- 145 sites were listed on the Facility Index System (FINDS) (This is a listing of any property or site that the USEPA has investigated, reviewed, or been made aware of in connection with <u>any</u> of its regulatory programs.);

- eight sites were listed on the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List (This is a compilation by the USEPA of sites that it has investigated or is currently investigating a release or threatened release of hazardous substances pursuant to CERCLA.);

- 141 sites were listed with the RCRA Program. (This program identifies and tracks hazardous waste from the point of generation to the point of disposal. This data base is a compilation by the USEPA of reporting facilities that generate, store, transport, treat, or dispose of hazardous waste.);

- one site was present in the OPEN DUMP inventory of facilities that do not comply with the USEPA's criteria for classification of Solid Waste Disposal Facilities and Practices; and,

- eight sites were present in the Emergency Response Notification System (ERNS) (This is a national data base used to collect information on reported releases of oil and hazardous substances. The data base contains information from spill reports made to federal agencies including the USEPA, the U.S. Coast Guard, the National Response Center, and the Department of Transportation.).

The facility is not included in the printout of FINDS and Resource Conservation and Recovery Act (RCRA) sites.

The record survey indicates that there are approximately 72 facilities within a one-mile radius of the facility that either generate hazardous wastes, are connected with various regulatory programs, or are currently undergoing some type of response by a regulatory agency. Groundwater and soil remediation for VOCs is currently being undertaken at DAP Corporation on Janney Road and at Gem City Chemical Company on Air City Avenue which borders the plant.

3.2 Previous Studies and Data

Some data exists on various studies conducted at the site and from monitoring data of the facility wells. This information is summarized in the following sections.

3.2.1 Well Information

Currently there are two groundwater wells (Wells No. 2 and 3) located on site at this facility. Well No. 2 is located within the boiler house near the eastern property boundary of the facility. Well No. 3 is located just east of Building 50. Additionally, an abandoned well (Well No. 1) is located within Building 40A. The well locations are shown in Figure 7.

Geologic logs and well completion information is not available for the wells.

Groundwater samples were collected and analyzed for these wells on several occasions between November 1989 and July 1990. The samples were analyzed for volatile organic compounds (VOCs) and metals. Copies of the analytical results are in Appendix B.

3.2.2 Soil-Gas Survey

Burlington developed a soil-gas sampling plan to evaluate the area within building 40B. Subsequently, the investigation was expanded to include the area of the footprint of the new building and a site-wide reconnaissance evaluation. The purpose of this investigation was to identify and characterize areas potentially impacted by chlorinated solvents.

Burlington conducted the soil-gas and groundwater headspace gas investigation at the facility during April 2 through 21, 1991. One hundred sixty-seven soil-gas samples, 28 groundwater headspace samples, and 17 duplicate samples (nine soil-gas and eight groundwater headspace) were collected and analyzed using Burlington's RECON℠ System soil-gas van and equipment. In addition, 23 groundwater samples were collected using the RECON System. These samples were submitted for VOC analysis using USEPA's SW-846 Method 8240.

The following is a summary of conclusions based on the data presented in a report describing the investigation performed in April 1991:

- chlorinated solvents have been released;
- chlorinated solvents had been found in sediments under the cement floor in Buildings 40A and 40B in the following areas:
  - bay K-8;
  - bays K-3, K-4, and K-5 (current location of the freon degreasing operation);
  - bays H-12 (present location of the 1,1,1-trichloroethane degreasing operation) and G-12;
  - bay G-8;
  - the central portion of Building 40B in bays J-4, J-6, I-4, I-5, and I-6;
- several other areas were identified that contain concentrations of chlorinated VOCs in the groundwater:

- the southwestern portion of Building 59;
- Building 40A and Building 40B;
- the area south of Building 53 (adjacent the 1,1,1-trichloroethane tanks); and
- the storage area east of Building 50.

A more detailed description of the results is provided in the report prepared by Burlington titled "RECON℠ Investigation - Dayton Thermal Products Division", dated June 28, 1991.

4 CONCLUSIONS

Based on the findings discussed in this report and the results of previous investigations performed at the facility, the following conclusions can be made.

- Soil and potentially groundwater at the facility have been impacted by various contaminants.
- Several potential offsite sources of contamination have been identified.
- Several potential onsite sources, both past and current, have been identified at the facility.
- Acustar is in the process of successfully reducing the amount of waste generated at the facility.
- Acustar is implementing the use of environmentally-safe chemical materials in place of hazardous chemicals for process systems at the facility.
- Acustar is acting voluntarily to investigate and remediate environmental impacts resulting from past and current plantsite operations.

5 RECOMMENDATIONS

Based on the findings discussed in this report, Burlington recommends the following tasks be performed to further identify potential sources of contamination at the facility.

- A file search should be performed at the OEPA's Southwest District Office in Dayton, Ohio, to obtain records of any investigation and remediation activities performed near the facility. Burlington has already submitted a request to the OEPA Southwest District Office to review specific reports on several facilities located in the vicinity of the facility.

- A series of detailed figures based on the results of the site visit and the information received from the OEPA should be prepared. The figures will illustrate the locations of potential sources of ~~hazardous wastes~~ that have been identified, both onsite and offsite.

significant chemical compounds.

- An interim progress meeting should be held at the facility to discuss the findings of this report. Comments and possible revisions to this report can be discussed during this meeting.

- Upon reviewing the appropriate documents and meeting with Acustar to discuss relevant findings and conclusions, Acustar and Burlington should develop recommendations for continuing the environmental program at the facility. A structured approach should be outlined, including a discussion of alternatives or options that may be available to Acustar.

the future depends on available financial resources.

REFERENCES

Norris, Stanley E. and Spieker, Andrew M. 1966. Ground-Water Resources of the Dayton Area, Ohio. United States Geological Survey Water Supply Paper 1808.

Schmidt, James J. 1986. Ground-Water Resources of Montgomery County. Ohio Department of Natural Resources Map. Scale 1:62,500.

Spieker, Andrew M. 1968. Ground-Water Hydrogeology and Geology of the Lower Great Miami River Valley Ohio. United States Geological Survey Professional Paper 605-A.

APPENDIX A

Environmental Audit Database Review for Zip Code Areas 45404 and 45414, Dayton, Ohio

THE FED REPORT

REPORT PROPERTY ADDRESS:

DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

NOTE: The entries in this Appendix are numbered as they appear on Plate 1.

THE FED REPORT

I. SUMMARY

This Report is a compilation of federal environmental data which identifies environmental problem sites and activities from the records of the United States Environmental Protection Agency (US EPA). The data contained in this Report is the result of a search by EAI's Environmental Data Systems of the following US EPA records:

1. National Priorities List (NPL)
2. Facility Index System (FINDS)
3. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)
4. Resource Conservation and Recovery Act (RCRA) Notification System
5. Solid Waste Facilities Not In Compliance with RCRA Subtitle D Criteria (OPEN DUMP SITES)
6. Emergency Response Notification System (ERNS)

A search of these databases identified: 0 NPL sites, 145 FINDS sites, 8 CERCLIS sites, 141 RCRA facilities, 1 OPEN DUMP Sites, and 8 ERNS sites.

The records of each of the foregoing sites and operators are contained in Section II of this report. The listed Sites are located within the zip code area or city stated at the beginning of each report sub-section. Section III contains 1 misidentified records of sites which appear to be located on or near the subject property.

II. REGULATORY INFORMATION
1. US EPA NPL DATABASE

DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

The National Priorities (Superfund) List (NPL) is EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund Program. A site, to be included on the NPL, must either meet or surpass a predetermined hazard ranking systems score, or be chosen as a state's top-priority site, or meet all three of the following criteria: (1) the US Department of Health and Human Services issues a health advisory recommending that people be removed from the site to avoid exposure; (2) EPA determines that the site represents a significant threat; and (3) EPA determines that remedial action is more cost-effective than removal action.

A search of the 1991 National Priorities List revealed the following Superfund sites located within the stated zip code areas:
45404, 45414

0 Sites found for the area specified.

II. REGULATORY INFORMATION
2. US EPA FINDS DATABASE
DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

The Facility Index System (FINDS) is a compilation of any property or site which the EPA has investigated, reviewed or been made aware of in connection with its various regulatory programs. Each record indicates the EPA Program Office that may have files on the site or facility.

A search of the 1991 FINDS Database revealed the following sites located within the stated zip code areas:
45404, 45414

FINDS Sites

65. FACILITY ADDRESS — EPA ID#

ENVIRONMENTAL PROCESSING SERVI — OHD000608588
416 LEO STREET
DAYTON, OH 45404
Region: 05
Latitude: 394655 Longitude: 0841127
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000608588
Superfund - Hazardous Waste-Superfund
Program ID # : OHD000608588

66. SHELL OIL CO DAYTON PLT — OHD000609156
801 BRANDT PIKE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000609156
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000140
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-79-0067

67. SUNOCO SERVICE STATION — OHD000671818
1448 TROY ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000

SUNOCO SERVICE STATION (CONT'D)

EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000671818

---

68. SUNOCO SERVICE STATION OHD000682823
201 VALLEY ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000682823

---

69. SUNOCO SERVICE STATION OHD000682963
7186 MILLER LANE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000682963

---

70. OHIO BELL TEL CO SUPPLY WAREHO OHD000720417
2024 VALLEY ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000720417

---

71. SCOTT EDWIN D BROKER OHD000721027
1820 VALLEY STREET
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000721027

FACILITY ADDRESS	EPA ID#

72. BENDER AND LOUDON MOTOR FREIGH — OHD000772822
1795 STANLEY AVE BLDG 7
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000772822

---

73. GMC DELCO PRODUCTS DIV DAYTON — OHD000817585
1619 KUNTZ ROAD
DAYTON, OH 45404
Region: 05
Latitude: 394726 Longitude: 0841023
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000817585
Permit Compliance System, Office of Water Enforcement and Permits
Program ID # : S114 AD
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000147

---

74. SUNMARK PETROLEUM MARKETING TE — OHD001722263
1708 FARR DR
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD001722263
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-00-0399

---

75. DAYTON ELECTRONIC PRODUCTS — OHD004241220
117 E HELENA ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004241220

FACILITY ADDRESS — EPA ID#

76. DURIRON CO INC THE FOUNDRY & P — OHD004241550
425 N FINDLAY ST
DAYTON, OH 45404
Region: 05
Latitude: 394604 Longitude: 0840903
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004241550
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000112

---

77. AMCA INTERNATIONAL CORP — OHD004243648
1752 STANLEY AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004243648

o

---

78. AMERICAN LUBRICANTS CO — OHD004244547
1227 DEEDS AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004244547
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : 05071OH01
Chemicals in Commerce Information System, Office of Toxic Substances
Program ID # : OH0002723

---

79. W & W MOLDED PLASTICS INC — OHD004245098
1441 MILBURN AVENUE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004245098

FACILITY ADDRESS — EPA ID#

80. ELECTRO-POLISH CO INC — OHD004264198
332 VERMONT AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004264198

---

81. PAINT AMERICA CO — OHD004275772
1501 WEBSTER ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004275772

---

82. KIMES ROBERT H INC — OHD004277240
2030 WEBSTER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004277240

---

83. ESTEE MOLD & DIE INC — OHD004277679
1467 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004277679

---

84. GAYSTON CORPORATION — OHD004278156
55 JANNEY ROAD
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004278156

FACILITY ADDRESS	EPA ID#

85. HOHMAN PLATING & MFG CO — OHD004278362
814 HILLROSE AVE
DAYTON, OH 45404
Region: 05
Latitude: 394700 Longitude: 0841036
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004278362
Compliance Data System, Office of Air and Radiation
Program ID # : 0857040217

---

86. HOLLANDER INDUSTRIES CORP — OHD004278438
219 KELLY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004278438

---

87. NEFF FOLDING BOX CO — OHD004278446
2001 KUNTZ RD
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004278446

---

88. DAYTON RUST PROOF COMPANY — OHD004278628
1030 VALLEY ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004278628

---

89. BRINKMAN TOOL & DIE INC — OHD004279659
325 KISER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004279659

FACILITY ADDRESS EPA ID#

90. AGA GAS INC OHD004279774
1223 MC COOK AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004279774

---

91. GEM CITY CHEMICALS INC OHD004472940
1287 AIR CITY AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004472940
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : 072960H01

---

92. ARAB TERMITE & PEST CONTROL IN OHD017944711
801 LEO ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : 091700H01

---

93. PAULS GARAGE INC OHD041060385
2941 VALLEY ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD041060385

---

94. LABINAL COMPONENTS GLOBE MOTOR OHD041066325
1784 STANLEY AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):

FACILITY ADDRESS | EPA ID#

LABINAL COMPONENTS GLOBE MOTOR (CONT'D)

Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD041066325

---

95. DAYTON CASTING COMPANY OHD056488786
300 KISSER STREET (KISER STREET)
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000104

---

96. DUFF TRUCK LINE INC OHD060913597
1744 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD060913597

---

97. BRAINERD MFG CO INDUSTRIES DIV OHD068953645
1723 WEBSTER
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD068953645

---

98. ROBERTS CONSOLIDATED INDUSTRIE OHD071288039
220 JANNEY RD
DAYTON, OH 45404
Region: 05
Latitude: 394723 Longitude: 0841040
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD071288039

FACILITY ADDRESS	EPA ID#

99. LESTON CORPORATION — OHD072864390
2017 VALLEY STREET
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD072864390

---

100. ANGELL MANUFACTURING CO INC — OHD072873664
1516-20 STANLEY AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD072873664

---

101. ARATEX SERVICES INC — OHD072876279
1200 WEBSTER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD072876279

---

102. ORBIT MOVERS — OHD074690769
969 DEEDS AVE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000

---

103. COASTAL TANK LINES INC — OHD083371591
2160 JERGENS RD
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD083371591

FACILITY ADDRESS EPA ID#

104. ADVANCED ASSEMBLY AUTOMATION OHD084755206
314 LEO ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD084755206

---

105. DIAL MACHINE SERVICE CO INC OHD093906055
131 KISER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD093906055

---

106. SOHIO DAYTON TERMINAL 620 OHD095194684
621 BRANDT PIKE
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD095194684
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000141
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-79-0022

---

107. GEM CITY SPECIAL MACHINE BUILD OHD095201513
1425 N KEOWEE ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD095201513

---

108. SPECIALTY SHEET METAL INC OHD097918395
821 HALL AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD097918395

FACILITY ADDRESS EPA ID#

114. LANDMARK INC OHD980280101
1800 TROY ST
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-00-0303

115. DAYTON TERMINAL OHD980486633
1700 FARR DR
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : 00862OH01

* SENECA CHIEF INC OHD980611826
403 HOWARD
FINLEY, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Superfund - Hazardous Waste-Superfund
Program ID # : OHD980611826

* Facility does not appear to be within the area of interest.

117. NORTH SAN LDFL INC OHD980611875
200 E VALLEYCREST DR
DAYTON, OH 45404
Region: 05
Latitude: 394718 Longitude: 0840905
EPA Responsible Office(s):
Superfund - Hazardous Waste-Superfund
Program ID # : OHD980611875

118. AGA BURDOX INC ACETALINE PLT OHD980793715
1727 FARR DR
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Chemicals in Commerce Information System, Office of Toxic Substances

AGA BURDOX INC ACETALINE PLT (CONT'D)

Program ID # : OH0047425

---

119. DAYTON CITY OF OHD981796964
520 KISER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD981796964

---

120. TAIT INC OHD981955776
500 WEBSTER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD981955776

---

121. ORBIT MOVERS OHD982606220
1101 NEGGLEY PLACE AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982606220
* The street address provided appears to be outside the zip codes of interest.

---

122. PENSKE TRUCK LEASING CO LP OHD982611592
1601 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982611592

---

123. DAYTON PWR & LIGHT N DAYTON OHD982617003
1317 TROY ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)

DAYTON PWR & LIGHT N DAYTON (CONT'D)

Program ID # : OHD982617003
Office of Toxic Substances (PADS)
Program ID # : OHD982617003

---

* DAYTON WIRE CO OHD982619959
7 DAYTON WIRE PKWY
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982619959
* Not able to locate facility using available information.

---

125. SELLS MIKE OHD986966489
33 LEO ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Superfund - Hazardous Waste-Superfund
Program ID # : OHD986966489

---

126. DAYTON TRANE OHD986967966
1441 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986967966

---

127. PRECISION METAL FABRICATION OHD986968865
191 HEID AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986968865

---

128. COLUMBIA GAS TRANS-AVONDALE OHD986975712
WANETA AVE S OF HALDEMAN AVE
DAYTON, OH 45404
Region: 05

COLUMBIA GAS TRANS-AVONDALE (CONT'D)

EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986975712

---

129. GLOBE MOTORS DIV OF LCS INC OHD986979136
1944 TROY ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986979136

---

130. GLOBE MOTORS DIV OF LCS INC OHD986979144
2275 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986979144

---

131. UNO VEN COMPANY OHT400010740
1796 FARR DR
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHT400010740
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000111
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-79-0014
Permit Compliance System, Office of Water Enforcement and Permits

---

132. CCC HIGHWAY INC OHT400011193
1464 KUNTZ ROAD
DAYTON, OH 45404
Region: 05
Latitude: 394730 Longitude: 0841000
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHT400011193

FACILITY ADDRESS EPA ID#

133. DAYTON MACHINE TOOL CO OHD004277802
1314 WEBSTER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004277802

134. DAYTON CLUTCH AND JOINT INC OHD007862485
2005 TROY ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD007862485

135. WISE GARAGE INC OHD007868748
1845 TROY ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD007868748

136. SHEFFIELD MACHINE TOOL CO OHD012183539
1506 MILBURN AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD012183539

137. NILO CO OHD054439781
115 VALLEYCREST DR
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD054439781

FACILITY ADDRESS EPA ID#

109. GEM CITY STAMPING INC OHD097922520
1546 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD097922520

---

110. AMCAST INDUSTRIAL CORP GHR DIV OHD099020133
400 DETRICKS ST
DAYTON, OH 45404
Region: 05
Latitude: 384630 Longitude: 0841025
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD099020133
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000019
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-00-0246

---

111. DAYTON PARTS CO NAPA OHD103556080
221 LEO ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD103556080

---

112. PENSKE TRUCK LEASING CO OHD107623761
1922 LINDORPH DR
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD107623761

---

113. PEPSI-COLA OF DAYTON OHD123387748
526 MILBURN AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD123387748

FACILITY ADDRESS	EPA ID#

138. DJINNII INDUSTRIES OHD061709127
302 VERMONT AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD061709127

---

139. CHILDRENS MEDICAL CTR OHD071289326
1 CHILDRENS PLAZA
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD071289326

---

140. ENTEC CORP OHD161890967
239 E HELENA ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD161890967

---

* APS MATERIALS INC OHD982066300
153 WALBROOK AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982066300

* Facility does not appear to be within the area of interest.

---

142. DIGITRON DAYTON OHD982643793
500 WEBSTER ST
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982643793

FACILITY ADDRESS	EPA ID#

143. AIR CITY MODELS AND TOOLS INC — OHD986972123
80 COMMERCE PARK DR
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986972123

---

144. WATKINS MOTOR LINES INC — OHD986979979
1799 STANLEY AVE
DAYTON, OH 45404
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986979979

---

9. SUNOCO SERVICE STATION — OHD000671719
2001 NEEDMORE RD
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000671719

---

10. MEAD IMAGE CENTER — OHD000809947
3908 IMAGE DRIVE
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD000809947

---

11. RIECK MECHANICAL SERVICES INC — OHD003861168
5245 WADSWORTH RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD003861168

FACILITY ADDRESS — EPA ID#

1. HARRIS GRAPHICS CORP BUS FORMS — OHD004202917
4900 WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004202917

---

124. B-N PLATING — OHD004243457
613 DANIEL ST
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004243457

---

2. TECH DEVELOPMENT INC — OHD004244851
6800 POE AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004244851
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : OHD004244851
Permit Compliance System, Office of Water Enforcement and Permits
Compliance Data System, Office of Air and Radiation

---

3. CHEMINEER INC — OHD004262465
5870 POE AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004262465

---

4. S & G PLATERS INC — OHD004272035
2640 KEENAN AVE
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):

S & G PLATERS INC (CONT'D)

Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004272035

---

12. SCHRIBER INDUSTIRES OHD004273181
4620 WEBSTER ST
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Compliance Data System, Office of Air and Radiation
Program ID # : 36450080001

---

13. OMEGA TOOL & DIE CO OHD004277398
6192 N WEBSTER ST
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004277398

---

14. AMERICAN CARCO CORP OHD004277687
2800 ONTARIO AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004277687

---

15. YODER INDUSTRIES INC OHD004277901
2520 NEEDMORE RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004277901

PROTECTIVE TREATMENTS INC (CONT'D)

5. PROTECTIVE TREATMENTS INC OHD004279204
3345 STOP EIGHT ROAD
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004279204
Compliance Data System, Office of Air and Radiation
Program ID # : 36450080096

---

6. INDUSTRIAL ELECTRIC MOTORS INC OHD004474524
5131 WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004474524

---

16. INDUSTRIAL WASTE DISPOSAL CO OHD004774345
3975 WAGONER FORD RD
DAYTON, OH 45414
Region: 05
Latitude: 394854 Longitude: 0841012
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004774345
Superfund - Hazardous Waste-Superfund
Program ID # : OHD004774345

---

7. MUSICKS BODY SHOP INC OHD041598046
3055 STOP EIGHT RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD041598046

---

8. ERNST ENTERPRISES INC OHD044497691
3361 SUCCESSFUL WAY
DAYTON, OH 45414
Region: 05

FACILITY ADDRESS	EPA ID#

ERNST ENTERPRISES INC (CONT'D)

EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD044497691
Compliance Data System, Office of Air and Radiation
Program ID # : 36426090003
Permit Compliance System, Office of Water Enforcement and Permits

---

17. ERNST ENTERPRISES INC — OHD044505915
4970 WAGONER FORD RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD044505915

---

18. GMC DELCO MORAINE DIV DAYTON N — OHD045557766
3100 NEEDMORE ROAD
DAYTON, OH 45414
Region: 05
Latitude: 394900 Longitude: 0841020
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD045557766
Permit Compliance System, Office of Water Enforcement and Permits
Program ID # : N196*BD
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000102
Office of Toxic Substances (PADS)
Program ID # : OHD045557766

---

19. PERFECT-A-TEC CORP — OHD054433818
6222 WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD054433818

---

20. INTEGRITY MFG CORP — OHD056487374
3723 INPARK CIRCLE
DAYTON, OH 45414
Region: 05

INTEGRITY MFG CORP (CONT'D)

Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD056487374

---

21. MIAMI VALLEY INTERNATIONAL TRU OHD056541055
7655 POE AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD056541055

---

22. CARGILL INC OHD061698676
3201 NEEDMORE RD
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD061698676
Compliance Data System, Office of Air and Radiation
Program ID # : 36450090131
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : OHD061698676
Chemicals in Commerce Information System, Office of Toxic Substances
Program ID # : OH007537Y
Permit Compliance System, Office of Water Enforcement and Permits
Superfund - Hazardous Waste-Superfund

---

23. MCNULTY MOTOR INC OHD063990089
7030 POE AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD063990089

MOORE MK & SONS CO (CONT'D)

24. MOORE MK & SONS CO OHD063999577
5150 WAGONER FORD RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-86-0391

---

25. SHERWIN-WILLIAMS CO WHSE OHD071272512
3671 DAYTON PARK RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Superfund - Hazardous Waste-Superfund
Program ID # : OHD071272512

---

26. MILES LABORATORIES INC OHD074694746
5600 BRENTLINGER DR
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD074694746
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000208

---

27. MAACO AUTO PAINTING & BODYWORK OHD074704404
3474 NEEDMORE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD074704404

---

28. MANFREDI MOTOR TRANSIT COMPANY OHD077758936
5560 BRENTLINGER DR
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)

MANFREDI MOTOR TRANSIT COMPANY (CONT'D)

Program ID # : OHD077758936

---

29. MONTGOMERY COUNTY INCIN NORTH OHD081594293
6589 N WEBSTER ST
DAYTON, OH 45414
Region: 05
Latitude: 394710 Longitude: 0841049
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD081594293
Compliance Data System, Office of Air and Radiation
Program ID # : 36450000077
Superfund - Hazardous Waste-Superfund
Program ID # : OHD081594293
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-78-0064

---

30. AMERICAN HONDA MOTOR CO INC PC OHD083365411
6400 SAND LAKE RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD083365411

---

31. NEEDMORE SERVICE CTR OHD083366120
2206 NEEDMORE RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD083366120

---

32. NORTHRIDGE LOCAL SCHOOL DIST OHD084750165
2011 TIMBERLANDS ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : OHD084750165

FACILITY ADDRESS	EPA ID#

33. EASTERN TANK LINES INC — OHD093901890
5536 BRENTLINGER DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD093901890

---

34. LYTTON INC — OHD095203451
3970 IMAGE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD095203451

---

35. AMERICAN BODY SHOP — OHD121994834
2507 ASHCRAFT RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD121994834

---

36. AGA GAS INC — OHD123277741
3800 DAYTON PARK DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD123277741

---

37. METOKOTE CORP PLT 6 — OHD150672509
3435 STOP EIGHT RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD150672509

FACILITY ADDRESS EPA ID#

38. ALLOYD ASBESTOS ABATEMENT CO OHD150672749
5734 WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD150672749
Office of Enforcement and Compliance Monitoring (DOCKET)
Program ID # : 05-90-E005
Permit Compliance System, Office of Water Enforcement and Permits

---

39. SHELL SERVICE STATION OHD980702336
2450 NEEDMORE
DAYTON, OH 45414
Region: 05
Latitude: 395048 Longitude: 0841242
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD980702336

---

40. DARLENES ONE HOUR CLEANERS OHD981198930
5901 N DIXIE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD981198930

---

41. DEMOLITION LDFL OHD981528839
WAGNER FORD RD AT WEBSTER RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Pesticides and TSCA Enforcement System, Office of Pesticides and Toxic Substances
Program ID # : OHD981528839

---

42. AMERICAN HONDA MOTOR CO INC RE OHD981794902
3920 SPACE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD981794902

FACILITY ADDRESS EPA ID#

43. VENTURE MFG OHD982625261
3949 DAYTON PARK DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982625261

---

44. VENTURE MFG CO OHD986967925
3616 DAYTON PARK DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986967925

---

45. COLUMBIA GAS TRANS-NORTH DIXIE OHD986975753
N DIXIE RD 0.2 MI S STOP EIGHT
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986975753

---

46. DURIRON CO INC MODERN IND PLAS OHD004241436
3337 N DIXIE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004241436

---

47. MILLAT INDUSTRIES CORP OHD004242657
4534 WADSWORTH RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004242657

FACILITY ADDRESS	EPA ID#

48. WALL COLMONOY — OHD004243689
5251 WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004243689

---

49. MAZER CORP — OHD004473708
2501 NEFF RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004473708

---

50. CROSSROADS TOOL AND MFG CO — OHD004482071
2787 ARMSTRONG LN
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD004482071

---

51. OLD COLONY ENVELOPE CO — OHD041229964
5621 N WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD041229964

---

52. GARNER BROS INC — OHD056602329
3361 NEEDMORE RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD056602329

FACILITY ADDRESS	EPA ID#

53. ELDRIDGE BODY SHOP INC — OHD079445094
4625 N DIXIE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD079445094

---

54. OMEGA AUTOMATION INC — OHD108564949
2850 NEEDMORE RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD108564949

---

55. ENCON INC — OHD122526023
6161 VENTNOR AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD122526023

---

56. DAYTON DIESEL INJECTION — OHD125494112
3341 N DIXIE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD125494112

---

57. MICAFIL INC — OHD139252266
2608 AND 2609 NORDIC RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD139252266

FACILITY ADDRESS EPA ID#

58. BROWNING BODY AND FRAME OHD170253868
9001 DIXIE DR
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD170253868

---

59. LORD CORP OHD981793698
4644 WADSWORTH RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD981793698

---

60. BROADWAY COMPANIES OHD981797673
6344 WEBSTER ST
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD981797673

---

61. FINDLEY ADHESIVES INC OHD982206484
4710 WADSWORTH RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD982206484

---

62. ALAN LAF INC OHD986975035
4530 WADSWORTH AVE
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986975035

FACILITY ADDRESS | EPA ID#

63. EXECUTIVE MOLD CORP — OHD986982841
2781 THUNDERHAWK CT
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986982841

---

64. NORTHRIDGE BODY SHOP AND DETAI — OHD986984276
5910 MILO RD
DAYTON, OH 45414
Region: 05
EPA Responsible Office(s):
Hazardous Waste Data Management System, Office of Solid Waste(RCRA)
Program ID # : OHD986984276

---

145 Sites found for the area specified.

II. REGULATORY INFORMATION
3. US EPA CERCLIS DATABASE
DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

The CERCLIS List is a compilation by EPA of the sites which EPA has investigated or is currently investigating for a release or threatened release of hazardous substances Pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund Act).

A search of the 1991 CERCLIS Database revealed the following sites within the stated zip code areas:
45404, 45414

CERCLIS Sites

FACILITY ADDRESS — EPA ID#

157. ENVIRONMENTAL PROCESSING SERVICES — OHD000608588
416 LEO ST
DAYTON, OH 45404
County: MONTGOMERY

Facility Type:	Status Undetermined
Ownership Indicator:	Unknown
Classification:	No Determination
Entry Source:	EPA Files
Status:	Has never been on the proposed final NPL
Proposed NPL Update #:	00
Latitude:	3947300
Longitude:	08410000
Event Discovery:	EPA, Fund Financed Actual Completion Date: 01/15/88
Preliminary Assessment:	EPA, Fund Financed Actual Completion Date: 01/09/89

NFA. At the conclusion of a preliminary assessment, no further action is anticipated for this site or no hazard was identified.

159. MIKE SELLS — OHD986966489
33 LED STREET (333 LEO STREET)
DAYTON, OH 45404
County: MONTGOMERY

Facility Type:	Status Undetermined
Classification:	No Determination
Status:	Has never been on the proposed final NPL
Latitude:	3947300
Longitude:	08410000
Event Discovery:	State, Fund Financed

MIKE SELLS (CONT'D)

	Actual Completion Date: 04/20/88
Preliminary Assessment:	State, Fund Financed
	Actual Completion Date: 12/14/90

---

117. NORTH SAN LDFL INC — OHD980611875
200 E VALLEYCREST DR
DAYTON, OH 45404
County: MONTGOMERY

Facility Type:	Not A Federal Facility
Ownership Indicator:	Other
Classification:	No Determination
Entry Source:	Notis
Status:	Has never been on the proposed final NPL
Latitude:	3947300
Longitude:	08410000
Event Discovery:	EPA, Fund Financed
	Actual Completion Date: 06/01/81
Listing Site Inspection:	State, Fund Financed
Preliminary Assessment:	EPA, Fund Financed
	Actual Completion Date: 06/28/85
Screening Site Inspection:	State, Fund Financed

---

* SENECA CHIEF INC — OHD980611826
403 HOWARD
FINLEY, OH 45404
County: MONTGOMERY

Facility Type:	Not A Federal Facility
Ownership Indicator:	Other
Classification:	No Determination
Entry Source:	Notis
Status:	Has never been on the proposed final NPL
Proposed NPL Update #:	00
Latitude:	3947300
Longitude:	08410000
Event Discovery:	EPA, Fund Financed
	Actual Completion Date: 06/01/81
Preliminary Assessment:	State, Fund Financed
	Actual Completion Date: 09/25/85
Preliminary Assessment:	State, Fund Financed
	Actual Completion Date: 02/07/90

NFA. At the conclusion of a preliminary assessment, no further action is anticipated for this site or no hazard was identified.

* Facility does not appear to be within the area of interest.

CERCLIS Sites

FACILITY ADDRESS	EPA ID#

16. IWD LIQUID WASTE — OHD004774345
3975 WAGONER FORD RD
DAYTON, OH 45414
County: MONTGOMERY

Facility Type:	Not A Federal Facility
Ownership Indicator:	Other
Classification:	No Determination
Entry Source:	Notis
Status:	Has never been on the proposed final NPL
Incident Type:	Non-Oil Spill
Proposed NPL Update #:	00
Latitude:	3950480
Longitude:	08412420
Event Discovery:	EPA, Fund Financed Actual Completion Date: 04/01/79
Preliminary Assessment:	State, Fund Financed Actual Completion Date: 12/01/83

NFA. At the conclusion of a preliminary assessment, no further action is anticipated for this site or no hazard was identified.

---

* KILGA ENTERPRISES — OHD980899942
5874 GERMANTOWN PIKE
DAYTON, OH 45414
County: MONTGOMERY

Facility Type:	Status Undetermined
Classification:	No Determination
Entry Source:	EPA Files
Status:	Has never been on the proposed final NPL
Latitude:	3950480
Longitude:	08412420
Event Discovery:	Federal Enforcement Actual Completion Date: 12/04/87
Preliminary Assessment:	State, Fund Financed Actual Completion Date: 11/07/90

* The street address provided appears to be outside the zip codes of interest.

---

158. MONTGOMERY CO N INCINERATOR — OHD081594293
6589 N WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

Facility Type:	Not A Federal Facility
Ownership Indicator:	Other
Classification:	No Determination
Entry Source:	HWDMS
Status:	Has never been on the proposed final NPL
Latitude:	3950480
Longitude:	08412420
Event Discovery:	EPA, Fund Financed

MONTGOMERY CO N INCINERATOR (CONT'D)

	Actual Completion Date: 08/01/80
Preliminary Assessment:	State, Fund Financed
	Actual Completion Date: 12/11/86
Screening Site Inspection:	EPA, Fund Financed
	Actual Completion Date: 06/30/87

---

25. SHERWIN WILLIAMS WAREHOUSE OHD071272512
3671 DAYTON PARK DRIVE
DAYTON, OH 45414
County: MONTGOMERY

Facility Type:	Status Undetermined
Classification:	No Determination
Status:	Has never been on the proposed final NPL
Latitude:	3950480
Longitude:	08412420
Event Discovery:	State, Fund Financed
	Actual Completion Date: 04/20/88

---

8 Sites found for the area specified.

II. REGULATORY INFORMATION
4. US EPA RCRA DATABASE
DAYTON
1600 WEBSTER STREET
DAYTON, OH 45404
County: MONTGOMERY

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by EPA of reporting facilities that generate, store, transport, treat or dispose of hazardous waste.

A search of the 1991 RCRA Database revealed the following facilities located within the stated zip code area(s):
45404, 45414

RCRA Sites

FACILITY ADDRESS	EPA ID#

104. ADVANCED ASSEMBLY AUTOMATION — OHD084755206
314 LEO ST
DAYTON, OH 45404
County: MONTGOMERY

Closed non-TSD facility

---

90. AGA GAS INC — OHD004279774
1223 MCCOOK AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

143. AIR CITY MODELS AND TOOLS INC — OHD986972123
80 COMMERCE PARK DR
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS	EPA ID#

77. AMCA INTERNATIONAL CORP — 0HD004243648
1752 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

---

78. AMERICAN LUBRICANTS CO — 0HD004244547
1227 DEEDS AVE
DAYTON, OH 45404
County: MONTGOMERY

---

100. ANGELL MANUFACTURING CO INC — 0HD072873664
1516-20 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

* APS MATERIALS INC — 0HD982066300
153 WALBROOK AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

* The street address provided appears to be outside the zip codes of interest.

---

101. ARATEX SERVICES — 0HD072876279
1200 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS	EPA ID#

72. BENDER AND LOUDON MOTOR FREIGHT INC — OHD000772822
1795 STANLEY AVE BLDG 7
DAYTON, OH 45404
County: MONTGOMERY

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

RCRA Permit Status: Protective/Precautionary Filer

A protective filer and precautionary filer who has been notified by EPA or the authorized state that its withdrawal has been approved.

---

77. BRAINERD MFG CO INDUSTRIES DIV — OHD068953645
1723 WEBSTER
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

89. BRINKMAN TOOL AND DIE INC — OHD004279659
325 KISER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

---

132. CCC HIGHWAY INC — OHT400011193
1464 KUNTZ ROAD
DAYTON, OH 45404
County: MONTGOMERY

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

FACILITY ADDRESS	EPA ID#

139. CHILDRENS MEDICAL CTR — OHD071289326
1 CHILDRENS PLAZA
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

103. COASTAL TANK LINES INC — OHD083371591
2160 JERGENS RD
DAYTON, OH 45404
County: MONTGOMERY

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

---

128. COLUMBIA GAS TRANS AVONDALE — OHD986975712
WANETA AVE S OF HALDEMAN AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

150. CORDAGE PACKAGING — OHD004479291
66 JANNEY RD
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

119. DAYTON CITY OF — OHD981796964
520 KISER ST
DAYTON, OH 45404
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

DAYTON CITY OF (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

134. DAYTON CLUTCH AND JOINT INC — OHD007862485
2005 TROY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

75. DAYTON ELECTRONIC PRODUCTS — OHD004241220
117 E HELENA ST
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

133. DAYTON MACHINE TOOL CO — OHD004277802
1314 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

111. DAYTON PARTS CO NAPA — OHD103556080
221 LEO ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS	EPA ID#

123. DAYTON PWR AND LIGHT N DAYTON SVC CTR — OHD982617003
1317 TROY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

88. DAYTON RUST PROOF COMPANY — OHD004278628
1030 VALLEY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

126. DAYTON TRANE — OHD986967966
1441 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

---

151. DAYTON WATER SYSTEMS — OHD061614673
1288 MCCOOK AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

124. DAYTON WIRE CO — OHD982619959
7 DAYTON WIRE PKWY
DAYTON, OH 45404
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

DAYTON WIRE CO (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

105. DIAL MACHINE SERVICE CO INC — OHD093906055
131 KISER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

142. DIGITRON DAYTON — OHD982643793
500 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

138. DJINNII INDUSTRIES — OHD061709127
302 VERMONT AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

76. DURIRON CO INC THE FOUNDRY & PUMP DIV — OHD004241550
425 N FINDLAY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

DURIRON CO INC THE FOUNDRY & PUMP DIV (CONT'D)

Existing Facility (In operation on or before 11/19/80)

This facility is engaged in the treatment, storage, and/or the disposal of hazardous waste.

TSD Facility Type: Land Disposal

A facility with land disposal units that are in operation, in post-closure care, closing prior to the certification, or new prior to permitting.

RCRA Permit Status: Permit Withdrawal Candidate

A facility which will not seek an operating permit for any units, This facility was previously covered by RCRA (or was thought to be covered by RCRA) and is now awaiting a decision on a status change request which may have been initiated by either the facility or the regulating authority.

---

80. ELECTRO-POLISH CO INC OHD004264198
332 VERMONT AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

140. ENTEC CORP OHD161890967
239 E HELENA ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

65. ENVIRONMENTAL PROCESSING SERVICES OHD000608588
416 LEO STREET
DAYTON, OH 45404
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

ENVIRONMENTAL PROCESSING SERVICES (CONT'D)

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

Existing Facility (In operation on or before 11/19/80)

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

This facility is engaged in the treatment, storage, and/or the disposal of hazardous waste.

TSD Facility Type: Storage/Treatment

A facility with storage and treatment units that are new operating or closing but not yet certified. The facility does not currently have incinerator units and does not have and did not have in the past any land disposal units.

RCRA Permit Status: Operating Facility/ Permit Candidate

An operating (not closed) treatment, storage, or disposal facility not belonging in other categories. Authority to operate may be statutory interim status or may have been granted through an interim status compliance letter or compliance order, (ISCL or ISCO) or other enforcement action. Facility may also have some units that are closed or permitted.

---

83. ESTEE MOLD AND DIE INC OHD004277679
1467 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

---

84. GAYSTON CORPORATION OHD004278156
55 JANNEY ROAD
DAYTON, OH 45404
County: MONTGOMERY

Closed non-TSD facility

FACILITY ADDRESS — EPA ID#

91. GEM CITY CHEMICALS INC — OHD004472940
1287 AIR CITY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

---

107. GEM CITY SPECIAL MACHINE BLDER — OHD095201513
1425 N KEOWEE ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

109. GEM CITY STAMPINGS INC — OHD097922520
1546 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

130. GLOBE MOTORS DIV OF LCS INC — OHD986979144
2275 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

129. GLOBE MOTORS DIV OF LCS INC — OHD986979136
1944 TROY ST
DAYTON, OH 45404
County: MONTGOMERY

GLOBE MOTORS DIV OF LCS INC (CONT'D)

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

73. GMC DELCO PRODUCTS DIV DAYTON PLANT OHD000817585
1619 KUNTZ ROAD
DAYTON, OH 45404
County: MONTGOMERY
SIC Code: 3621 3714

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

Closed Facility (Previously had interim status or an EPA Permit, but no longer has either.)

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

RCRA Permit Status: Closure Certified

A facility which has completed closure through 40 CFR 264 or 40 CFR 265 for all units, and such closure has been certified by the owner and by a professional engineer.

This category also includes storage facilities where EPA or the authorized state has confirmed the reversion to storage for less than ninety days per 40 CFR 262. The regulating agency has not taken deliberate action to terminate the facility's interim status as a result of LOIS non-certification.

---

85. HOHMAN PLATING & MFG CO OHD004278362
814 HILLROSE AVE
DAYTON, OH 45404
County: MONTGOMERY
SIC Code: 3471

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

Existing Facility (In operation on or before 11/19/80)

FACILITY ADDRESS	EPA ID#

HOHMAN PLATING & MFG CO (CONT'D)

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

RCRA Permit Status: Protective/Precautionary Filer

A protective filer and precautionary filer who has been notified by EPA or the authorized state that its withdrawal has been approved.

---

86. HOLLANDER INDUSTRIES CORP — OHD004278438
219 KELLY AVE
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

110. JOHN PAUL ENTERPRISES INC — OHD099020133
400 DETRICKS ST
DAYTON, OH 45404
County: MONTGOMERY
SIC Code: 3321

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

Closed Facility (Previously had interim status or an EPA Permit, but no longer has either.)

RCRA Permit Status: Closure Certified

A facility which has completed closure through 40 CFR 264 or 40 CFR 265 for all units, and such closure has been certified by the owner and by a professional engineer.

This category also includes storage facilities where EPA or the authorized state has confirmed the reversion to storage for less than ninety days per 40 CFR 262. The regulating agency has not taken deliberate action to terminate the facility's interim status as a result of LOIS non-certification.

FACILITY ADDRESS	EPA ID#

82. KIMES ROBERT H INC — OHD004277240
2030 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

94. LABINAL COMPONENTS GLOBE MOTORS DIV — OHD041066325
1784 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

99. LESTON CORPORATION — OHD072864390
2017 VALLEY STREET
DAYTON, OH 45404
County: MONTGOMERY

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

---

87. NEFF FOLDING BOX CO — OHD004278446
2001 KUNTZ RD
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

137. NILO CO — OHD054439781
115 VALLEYCREST DR
DAYTON, OH 45404
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

NILO CO (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

70. OHIO BELL-SUPPLY WAREHOUSE OHD000720417
2024 VALLEY STREET
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

152. OHIO DEPT OF TRANSP OHD982205445
4397 PAYNE AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

* ORBIT MOVERS OHD982606220
1101 NEGGLEY PLACE AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

* The street address provided appears to be outside the zip codes of interest.

81. PAINT AMERICA CO OHD004275772
1501 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

FACILITY ADDRESS — EPA ID#

93. PAULS GARAGE INC — OHD041060385
2941 VALLEY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

---

122. PENSKE TRUCK LEASING CO LP — OHD982611592
1601 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

112. PENSKE TRUCK LEASING CO LP — OHD107623761
1922 LINDORPH DR
DAYTON, OH 45404
County: MONTGOMERY

Closed non-TSD facility

---

113. PEPSI COLA OF DAYTON — OHD123387748
526 MILBURN AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

127. PRECISION METAL FABRICATION — OHD986968865
191 HEID AVE
DAYTON, OH 45404
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

PRECISION METAL FABRICATION (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

153. PRICE BROTHERS 0HD099019259
1950 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

154. PRICE BROTHERS CO R AND D LAB 0HD986985315
1932 E MONUMENT AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

155. REICHARD BUICK 0HD986985752
519 N FINDLAY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

98. ROBERTS CONSOLIDATED INDUSTRIES 0HD071288039
220 JANNEY RD
DAYTON, OH 45404
County: MONTGOMERY
SIC Code: 2891

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

ROBERTS CONSOLIDATED INDUSTRIES (CONT'D)

Existing Facility (In operation on or before 11/19/80)

RCRA Permit Status: Protective/Precautionary Filer

A protective filer and precautionary filer who has been notified by EPA or the authorized state that its withdrawal has been approved.

---

71. SCOTT EDWIN D BROKER OHD000721027
1820 VALLEY STREET
DAYTON, OH 45404
County: MONTGOMERY

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

RCRA Permit Status: Protective/Precautionary Filer

A protective filer and precautionary filer who has been notified by EPA or the authorized state that its withdrawal has been approved.

---

136. SHEFFIELD MACHINE TOOL CO OHD012183539
1506 MILBURN AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

66. SHELL OIL CO DAYTON PLANT OHD000609156
801 BRANDT PIKE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

FACILITY ADDRESS	EPA ID#
106. SOHIO DAYTON TERMINAL 620 621 BRANDT PIKE DAYTON, OH 45404 County: MONTGOMERY	OHD095194684

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

108. SPECIALTY SHEET METAL INC — OHD097918395
821 HALL AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

74. SUNMARK PETROLEUM MARKETING TERMINAL — OHD001722263
1708 FARR DR
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

74. SUNMARK PETROLEUM MARKETING TERMINAL — OHD000685156
1708 FARR DR
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

67. SUNOCO SERVICE STATION — OHD000671818
1448 TROY ST
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

FACILITY ADDRESS	EPA ID#

68. SUNOCO SERVICE STATION — OHD000682823
201 VALLEY ST
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

69. SUNOCO SERVICE STATION — OHD000682963
7186 MILLER LANE
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

120. TAIT INC — OHD981955776
500 WEBSTER ST
DAYTON, OH 45404
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

156. UNITED PARCEL SERVICE — OHD981537681
1308 BRANDT PIKE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

131. UNO VEN COMPANY DAYTON TERMINAL — OHT400010740
1796 FARR DRIVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS	EPA ID#

79. W & W MOLDED PLASTICS INC — OHD004245098
1441 MILBURN AVENUE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

RCRA Permit Status: Protective/Precautionary Filer

A protective filer and precautionary filer who has been notified by EPA or the authorized state that its withdrawal has been approved.

---

144. WATKINS MOTOR LINES INC — OHD986979979
1799 STANLEY AVE
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

135. WISE GARAGE INC — OHD007868748
1845 TROY ST
DAYTON, OH 45404
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

36. AGA GAS INC — OHD123277741
3800 DAYTON PARK DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS EPA ID#

62. ALAN LAF INC OHD986975035
4530 WADSWORTH AVE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

35. AMERICAN BODY SHOP OHD121994834
2507ASHCRAFT RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

14. AMERICAN CARCO CORP OHD004277687
2800 ONTARIO AVE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

30. AMERICAN HONDA MOTOR CO INC PC OHD083365411
6400 SAND LAKE RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

42. AMERICAN HONDA MOTOR CO INC REDISTR CTR OHD981794902
3920 SPACE DR
DAYTON, OH 45414
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

124. B-N PLATING — OHD004243457
613 DANIEL ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

---

60. BROADWAY COMPANIES — OHD981797673
6344 WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

58. BROWNING BODY AND FRAME — OHD170253868
9001 DIXIE DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

22. CARGILL INC — OHD061698676
3201 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

3. CHEMINEER INC — OHD004262465
5870 POE AVE
DAYTON, OH 45414
County: MONTGOMERY

FACILITY ADDRESS EPA ID#

CHEMINEER INC (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

45. COLUMBIA GAS TRANS NORTH DIXIE OHD986975753
N DIXIE RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

50. CROSSROADS TOOL AND MFG CO OHD004482071
2787 ARMSTRONG LN
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

40. DARLENES ONE HOUR DRY CLEANERS OHD981198930
5901 N DIXIE DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates less than 100 kg/mo of non-acutely hazardous waste.

---

56. DAYTON DIESEL INJECTION OHD125494112
3341 N DIXIE DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS	EPA ID#

46. DURIRON CO INC MODERN IND PLASTICS DIV — OHD004241436
3337 N DIXIE DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

33. EASTERN TANK LINES INC — OHD093901890
5536 BRENTLINGER DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

53. ELDRIDGE BODY SHOP INC — OHD079445094
4625 N DIXIE DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

55. ENCON INC — OHD122526023
6161 VENTNOR AVE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

17. ERNST ENTERPRISES VALLEY CONCRETE INC — OHD044505915
4970 WAGONER FORD RD
DAYTON, OH 45414
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

ERNST ENTERPRISES VALLEY CONCRETE INC (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

63. EXECUTIVE MOLD CORP — OHD986982841
2781 THUNDERHAWK CT
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

61. FINDLEY ADHESIVES INC — OHD982206484
4710 WADSWORTH RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

145. FLUTRONICS INC DYNAMIC TECH — OHD023929227
5661 WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

52. GARNER BROS INC — OHD056602329
3361 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS — EPA ID#

18. GMC DELCO MORAINE DIV DAYTON NORTH — OHD045557766
3100 NEEDMORE ROAD
DAYTON, OH 45414
County: MONTGOMERY
SIC Code: 3714

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

Existing Facility (In operation on or before 11/19/80)

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

This facility is engaged in the treatment, storage, and/or the disposal of hazardous waste.

TSD Facility Type: Storage/Treatment

A facility with storage and treatment units that are new operating or closing but not yet certified. The facility does not currently have incinerator units and does not have and did not have in the past any land disposal units.

RCRA Permit Status: Operating Facility/ Permit Candidate

An operating (not closed) treatment, storage, or disposal facility not belonging in other categories. Authority to operate may be statutory interim status or may have been granted through an interim status compliance letter or compliance order, (ISCL or ISCO) or other enforcement action. Facility may also have some units that are closed or permitted.

---

1. HARRIS GRAPHICS CORP BUS FORMS SYSTEMS — OHD004202917
4900 WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

6. INDUSTRIAL ELECTRIC MOTORS INC — OHD004474524
5131 WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

16. INDUSTRIAL WASTE DISPOSAL CO — OHD004774345
3975 WAGONER FORD RD
DAYTON, OH 45414
County: MONTGOMERY

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

---

20. INTEGRITY MFG CORP — OHD056487374
3723 INPARK CIRCLE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

146. JORGENSON EARLE M CO — OHD986974988
2531 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

59. LORD CORP — OHD981793698
4644 WADSWORTH RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

34. LYTTON INC — OHD095203451
3970 IMAGE DR
DAYTON, OH 45414
County: MONTGOMERY

LYTTON INC (CONT'D)

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

27. MAACO 0HD074704404
3474 NEEDMORE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

28. MANFREDI MOTOR TRANSIT COMPANY 0HD077758936
5560 BRENTLINGER DR
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

This facility is engaged in the off-site transportation of hazardous waste by air, rail, road (highway), and/or water.

---

49. MAZER CORP 0HD004473708
2501 NEFF RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

23. MCNULTY MOTORS INC 0HD063990089
7030 POE AVE
DAYTON, OH 45414
County: MONTGOMERY

MCNULTY MOTORS INC (CONT'D)

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

10. MEAD IMAGE CENTER OHD000809947
3908 IMAGE DRIVE
DAYTON, OH 45414
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

---

37. METOKOTE CORP PLT 6 OHD150672509
3435 STOP EIGHT RD
DAYTON, OH 45414
County: MONTGOMERY

---

21. MIAMI VALLEY INTERNATIONAL TRK OHD056541055
7655 POE AVE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

57. MICAFIL INC OHD139252266
2608 AND 2609 NORDIC RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

26. MILES INC OHD074694746
5600 BRENTLINGER DR
DAYTON, OH 45414
County: MONTGOMERY

FACILITY ADDRESS	EPA ID#

MILES INC (CONT'D)

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

47. MILLAT INDUSTRIES CORP — OHD004242657
4534 WADSWORTH RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

29. MONTGOMERY CNTY INCINERATOR NORTH PLT — OHD081594293
6589 N WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

RCRA Permit Status: Protective/Precautionary Filer

A protective filer and precautionary filer who has been notified by EPA or the authorized state that its withdrawal has been approved.

---

7. MUSICKS BODY SHOP INC — OHD041598046
3055 STOP EIGHT RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

31. NEEDMORE SERVICE CENTER — OHD083366120
2206 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

NEEDMORE SERVICE CENTER (CONT'D)

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

64. NORTHRIDGE BODY SHOP AND DETAIL OHD986984276
5910 MILO RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

51. OLD COLONY ENVELOPE CO OHD041229964
5621 N WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

54. OMEGA AUTOMATION INC OHD108564949
2850 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

13. OMEGA TOOL AND DIE OHD004277398
6192 NORTH WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

FACILITY ADDRESS	EPA ID#

19. PERFECT-A-TEC CORP 6222 WEBSTER ST DAYTON, OH 45414 County: MONTGOMERY — OHD054433818

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

147. PROJECTS UNLIMITED 3680 WYSE RD DAYTON, OH 45414 County: MONTGOMERY — OHD004277869

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

---

5. PROTECTIVE TREATMENTS INC 3345 STOP EIGHT ROAD DAYTON, OH 45414 County: MONTGOMERY — OHD004279204

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

11. RIECK MECHANICAL SERVICES INC 5245 WADSWORTH RD DAYTON, OH 45414 County: MONTGOMERY — OHD003861168

This facility generates at least 1000 kg/mo of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste.

---

4. S & G PLATERS INC 2640 KEENAN AVE DAYTON, OH 45414 County: MONTGOMERY — OHD004272035

FACILITY ADDRESS	EPA ID#

S & G PLATERS INC (CONT'D)

Non-handler (I.E. other than RCRA regulated waste handler)

39\. SHELL SERVICE STATION 0HD980702336
2450 NEEDMORE
DAYTON, OH 45414
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

9\. SUNOCO SERVICE STATION 0HD000671719
2001 NEEDMORE RD
DAYTON, OH 45414
County: MONTGOMERY

Non-handler (I.E. other than RCRA regulated waste handler)

2\. TECH DEVELOPMENT INC 0HD004244851
6800 POE AVE
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.

148\. TONEY TOOL MFG INC 0HD986986172
5724 WEBSTER ST
DAYTON, OH 45414
County: MONTGOMERY

This facility generates at least 100 kg/mo, but less than 1000 kg/mo of non-acutely hazardous waste.